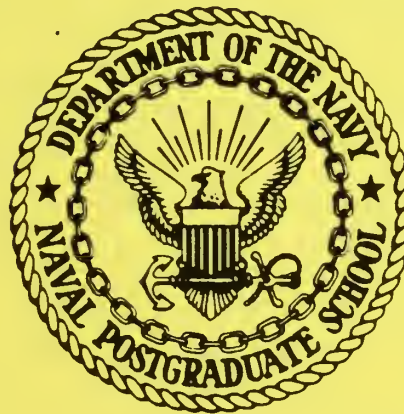


NAVAL POSTGRADUATE SCHOOL

Monterey, California



MIZLANT 84 DATA REPORT
RESULTS OF AN OCEANOGRAPHIC CRUISE
TO THE GREENLAND SEA

AUGUST - SEPTEMBER 1984

by

Robert H. Bourke
and
Robert G. Paquette

Interim Report for Period 1 August 1984 - 1 June 1985

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Prepared for:
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20. ABSTRACT (Continue on reverse side if necessary and identify by block number) This report presents plots of property profiles for each of the 333 oceanographic stations occupied by the U.S. Coast Guard Icebreaker over the continental shelf waters off the east coast of Greenland in August & September 1984. A Neil Brown Mark III CTD was used to obtain temperature and salinity profiles to the sea floor in shallow water and at least to 600m in deeper water. In addition to temperature and salinity profiles, plots of sound speed and density (sigma-t) are shown.		

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MIZLANT 84 DATA REPORT
RESULTS OF AN OCEANOGRAPHIC CRUISE TO THE GREENLAND SEA
AUGUST-SEPTEMBER 1984

by

Robert H. Bourke and Robert G. Paquette

I. INTRODUCTION

This report presents the oceanographic data acquired during the cruise of the U. S. Coast Guard ice breaker NORTHWIND (WAGB-282) to the continental shelf area of the Greenland Sea during August and September 1984. This cruise has been designated Arctic East 1984 (AE84), but for continuity with past cruises is also termed MIZLANT 84. The cruise had two primary objectives: (a) to map the bathymetry of the shelf between 76° and 82°N, and (b) to conduct CTD soundings in these waters to establish the circulation and water mass structure over the troughs and shoals of the shelf. Because of very light ice conditions, both of these objectives were completely met. The NORTHWIND track covered over 6500 km (3500 miles) providing continuous depth soundings over the entire track. Over 300 CTD stations were made while on the shelf, most conducted at 10-15 km intervals in the high interest areas of the troughs, coastal region and other areas of rapidly changing bottom depth. A preliminary overview of the cruise results has previously been reported by Bourke(1984).

II. GENERAL DISCUSSION

The scientific party boarded NORTHWIND between 17 and 19 August 1984 in Reykiavik, Iceland. The members of the scientific party and their affiliations are:

Dr. Robert H. Bourke, Naval Postgraduate School,
Chief Scientist

Dr. John L. Newton, Polar Research Laboratory

Mr. Robert K. Perry, Planning Systems, Inc., Chief
Bathymetrist

Mr. Kim O. McCoy, Private Consultant to NPS

LCDR Mark D. Tunnicliffe, CAF, Student NPS

Mr. George E. Betts, Student NPS.

Prior to boarding NORTHWIND, Drs. Bourke and Newton visited Dr. Peter Wadhams on 17 August at the Scott Polar Research Institute of the University of Cambridge, England. The purpose of the visit was to learn of oceanographic conditions along the ice edge and the East Greenland Polar Front (EGPF) as delineated in June and July by the MIZEX participants. We discussed the characteristics of the "Molloy Deep" gyre or eddy which was observed and sampled several times throughout the summer during the MIZEX experiment. Dr. Wadhams provided us with a photo of the area as observed by the NOAA-7 satellite visual band on 27 August 1984. As seen in Figure 1, this shows only a moderate ice concentration near the shelf break and almost no ice over most of the shelf. This lack of ice, at most 7-8 tenths in patches but more generally 2-3 tenths, was confirmed once NORTHWIND arrived on the shelf; it was singularly responsible for the large amount of bathymetric and CTD data gathered. Daily visual-band photographs for the period July-September 1984 were obtained after the cruise was completed from the satellite tracking station at Tromso, Norway.

The cruise track and location of CTD stations are indicated in Figure 2. Sampling commenced on 22 August and terminated four weeks later on 16 September. A listing of the location of all CTD stations and ancillary climatological data at each station is shown in Appendix A. The atmospheric pressure, air temperature, and wind speed and direction measured every 6 hours are shown in Figures 3, 4, and 5. The pulse-like nature of the pressure curve reflects periods of bright, sunny weather

(periods of high pressure) and cloudy, drizzly days (low pressure). No major storms passed through the area during the cruise. The depressions in the pressure pattern are due to storms which passed far to the south. Throughout the cruise the air temperature hovered about the freezing point, generally remaining within the $\pm 3^{\circ}\text{C}$ band. The correlation of air temperature with atmospheric pressure is weak. Wind speeds were generally low, mostly in the 5 to 10 knot range. Periods of wind speeds in excess of 10 knots were generally limited to less than a day except for the period 3 to 4 September when the wind speed remained consistently above 15 knots.

A detailed bathymetry of the East Greenland continental shelf is shown in Figure 6. The bottom contours were derived from earlier unclassified sources, supplemented by the soundings taken at each CTD station during the cruise. Similar data from the NORTHWIND 81 and WESTWIND 79 cruises to this area were also incorporated to expand and corroborate the 1984 data set. The existence of several cross-shelf troughs and one lying parallel to and below the fast ice edge along the Greenland coast are readily identifiable.

After completion of data editing, including despiking and removal of spurious data points, plotting routines were used to display property profiles for each station: temperature, salinity, sound speed, and density (σ_t). These are plotted compactly either two or four stations per page depending on the water depth and are displayed in Appendix B.

III. INSTRUMENTATION

The primary oceanographic instrument was the Neil Brown Instrument Systems (NBIS) Mark III CTD. Data were collected, stored, and displayed using a Hewlett-Packard 9835A computer and 9872A x-y flat-bed plotter. Early in

the cruise the plotter failed. All subsequent graphical outputs were done on the back-up plotter, a Hewlett-Packard 9225B. As in the past, a wire cage was constructed around the base on the CTD to protect the sensors from damage due to ice. No apparent deviation in sensor accuracy has been noted using this technique.

The temperature and conductivity sensors of the NBIS CTD were calibrated at NPS prior to the cruise. A calibrated 3200 decibar pressure sensor was also installed at NPS in order to make deep casts to better establish the baroclinic circulation and transport. Although much of the cruise was conducted in shallow water (<300 m), the vertical resolution of the sensor was more than adequate to resolve all finestructure features of interest. A post-cruise calibration was conducted to establish if any drift occurred. The comparison between pre- and post-cruise conductivity calibrations was inconclusive. An error in either or both calibration curves is likely to have occurred; the uncertainty is about ± 0.005 . However, a comparison between salinities measured at two nearby stations, one taken at the beginning of the cruise, the other near the end of the cruise, and each at about 1000 m depth where the salinity profile is quite stable, shows no drift greater than 0.001 ppt occurred. No bottle salinities were available for calibration due to mechanical failure of the laboratory salinometer.

A light-weight, portable STD was provided by Mr. McCoy for use as a back-up as well as deployment from the ship's helicopters and/or small boat. This is a new, state-of-the-art instrument manufactured by Applied Micro Systems of Vancouver, B. C. It appears to be an ideal replacement for the 15-year old APL/UW light-weight profiler. McCoy has acquired a battery-operated, motorized portable winch of the APL variety to replace the manually operated winch used on this cruise. Eight STD casts were made with this

unit; several casts were made with it strapped to the NBIS CTD for intercomparison. The precision of the STD is well within the needs of our measurement program (Figure 7). However, the vertical resolution should be increased, a feature already incorporated into a more advanced model of this STD.

The two embarked helicopters were used extensively in an ice reconnaissance role. Forty-five sorties were flown for a total of 71 flight hours. Many additional miles of echo soundings were gained, especially along the Greenland coast, due to helicopter assistance in locating navigable leads in the ice.

IV. REFERENCES

Bourke, R. H., Preliminary Results of the Oceanographic Cruise of USCGC NORTHWIND to the Greenland Sea, August-September 1984, NPS 68-84-019, Naval Postgraduate School, Monterey, 12 p., 1984.

Figure 1. NOAA-7 satellite visual band, 27 August 1984, showing limited ice cover off the east coast of Greenland.



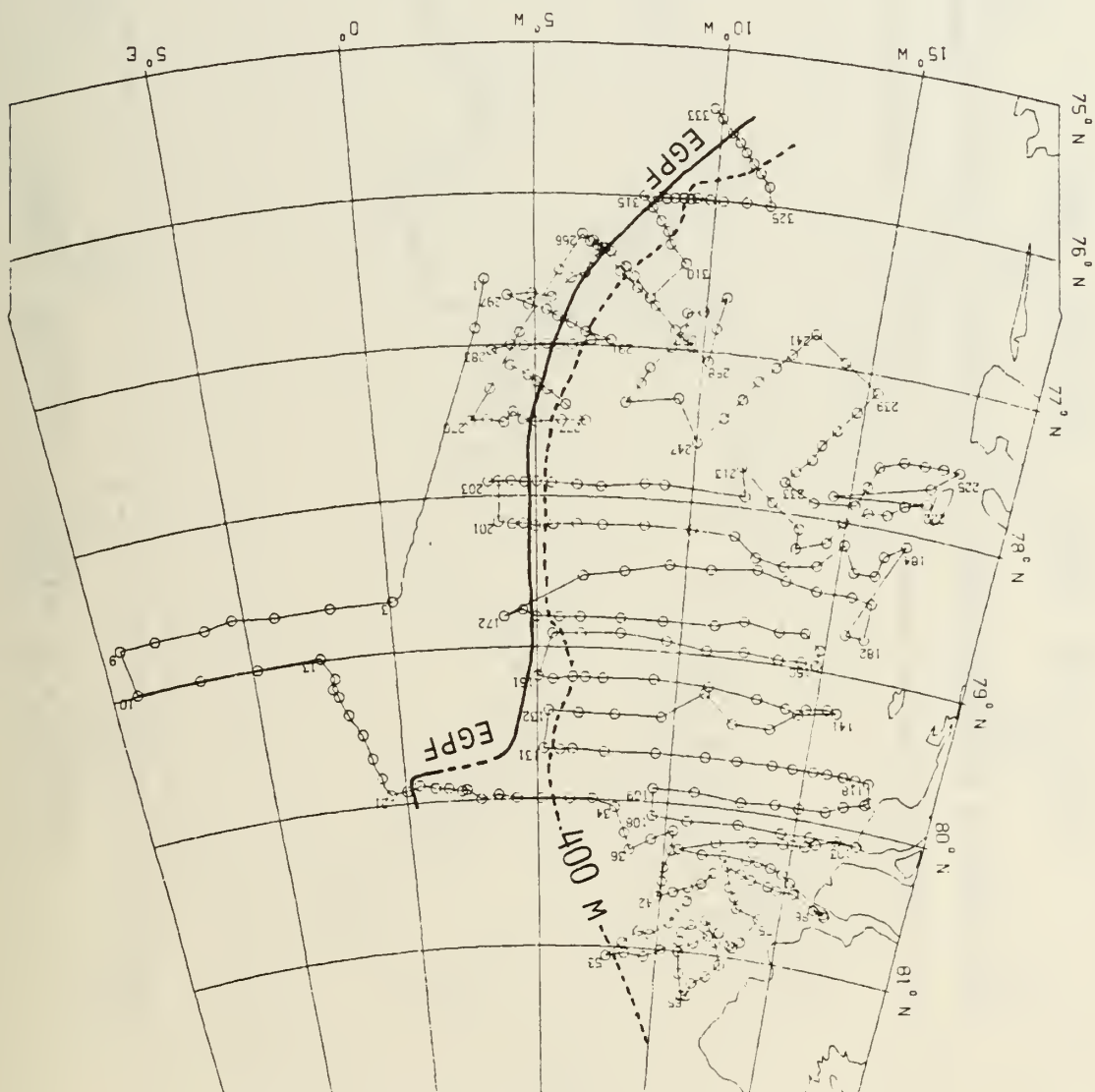


Figure 2. Cruise track and location of CTD stations during the AE84 cruise of August-September 1984. The position of the East Greenland Polar Front and the continental shelf break (400 m isobath) are also shown.

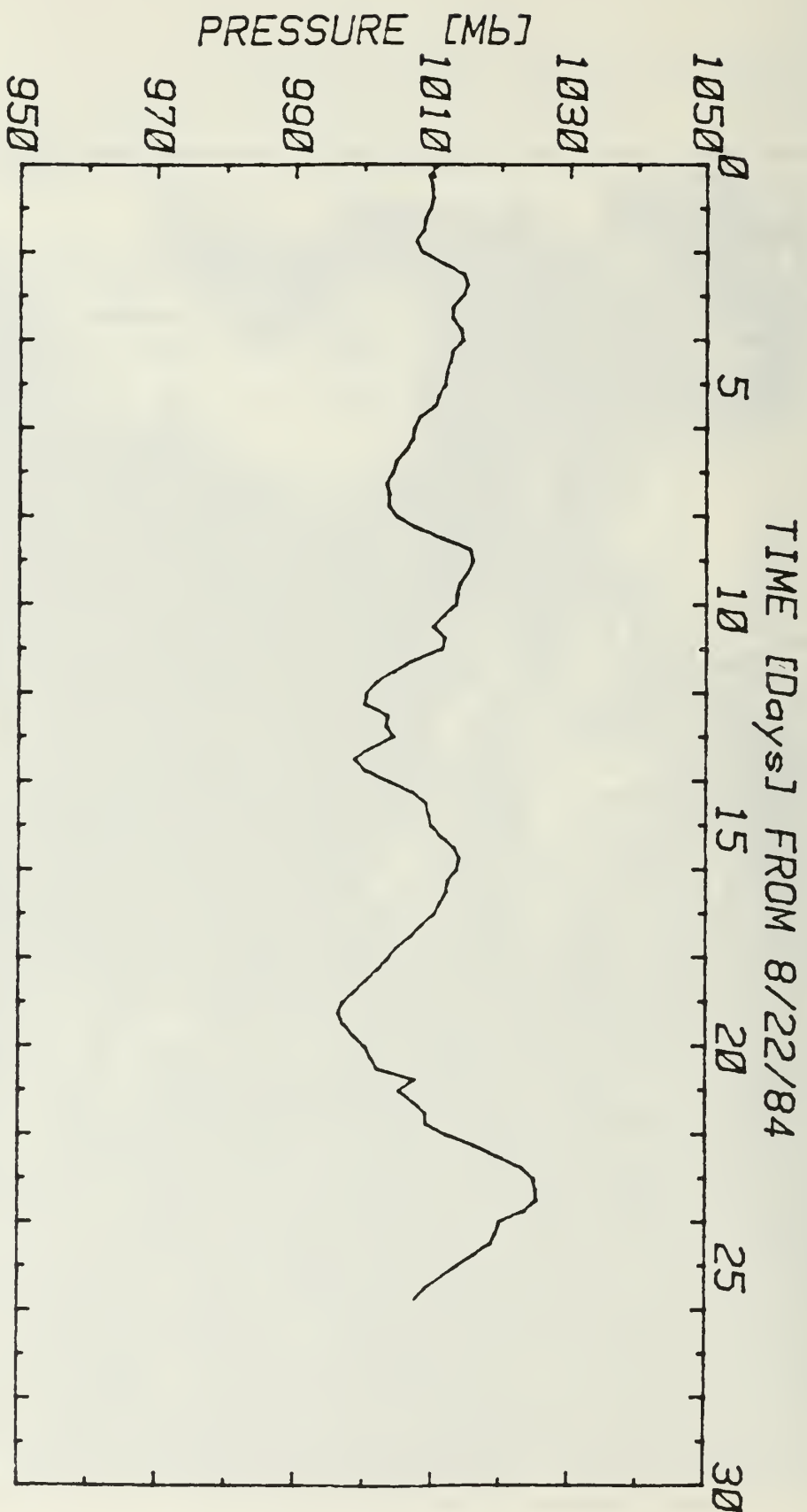


Figure 3. Atmospheric pressure measured every 6 hours commencing 22 August 1984.

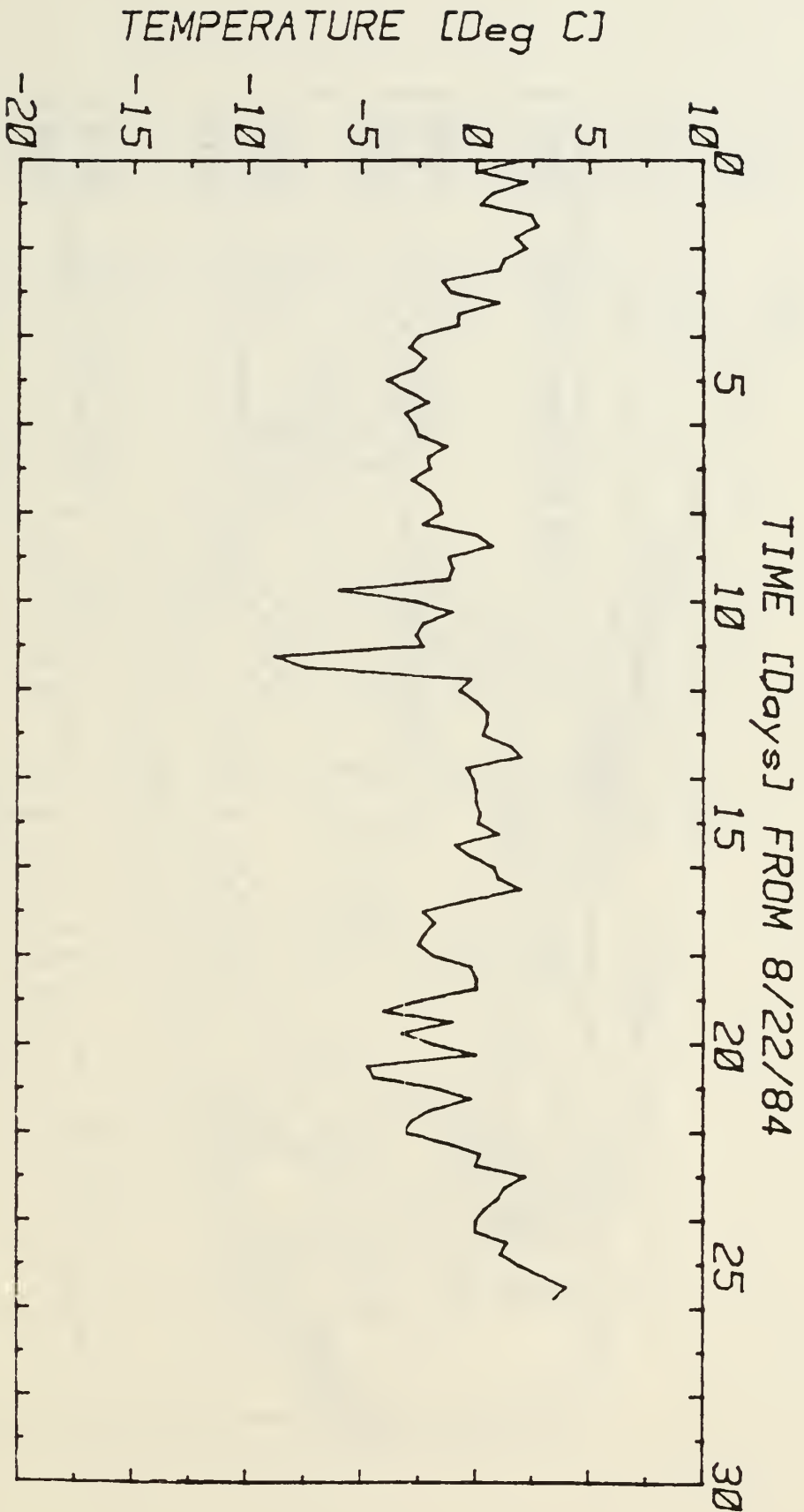


Figure 4. Air temperature measured every 6 hours commencing 22 August 1984.

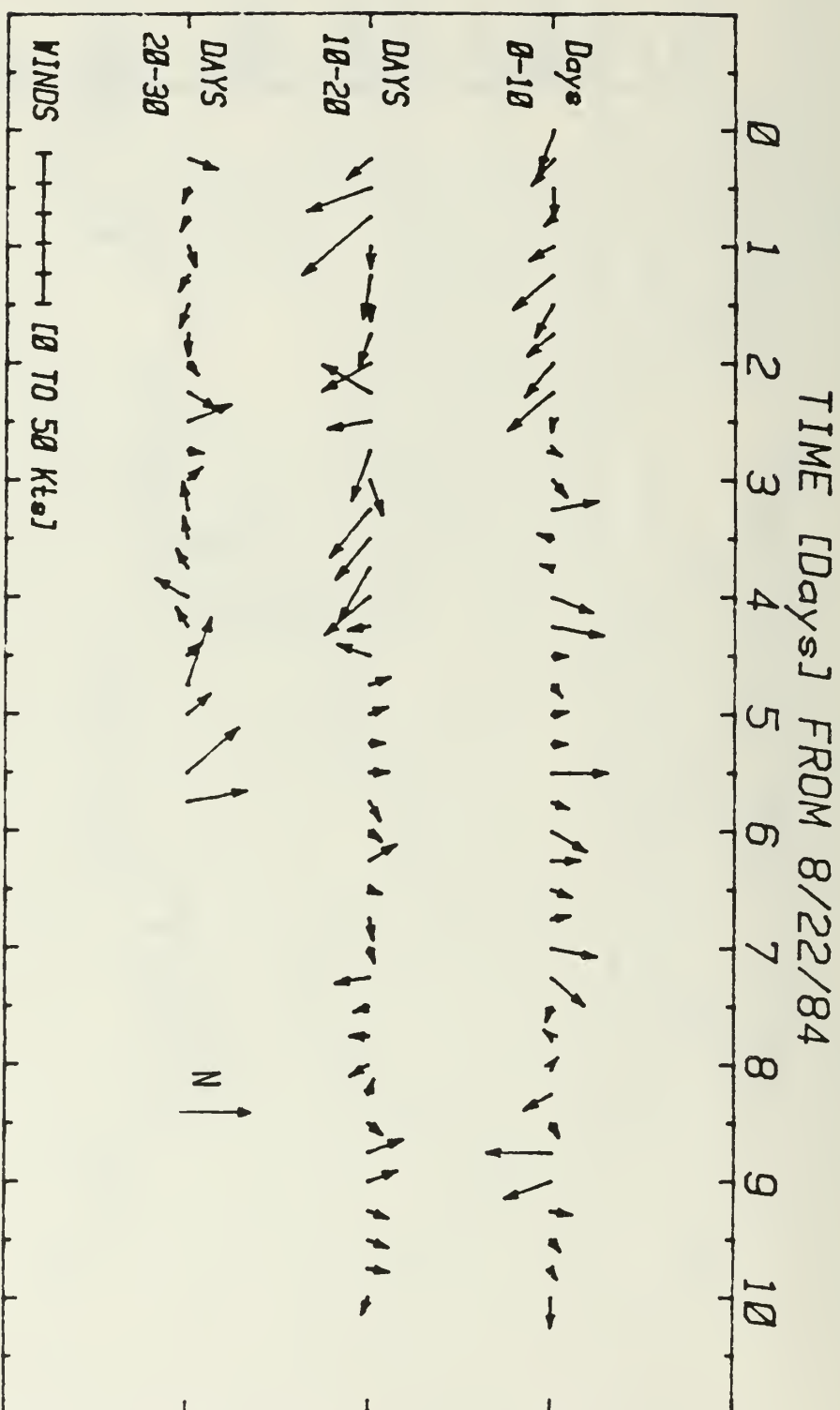
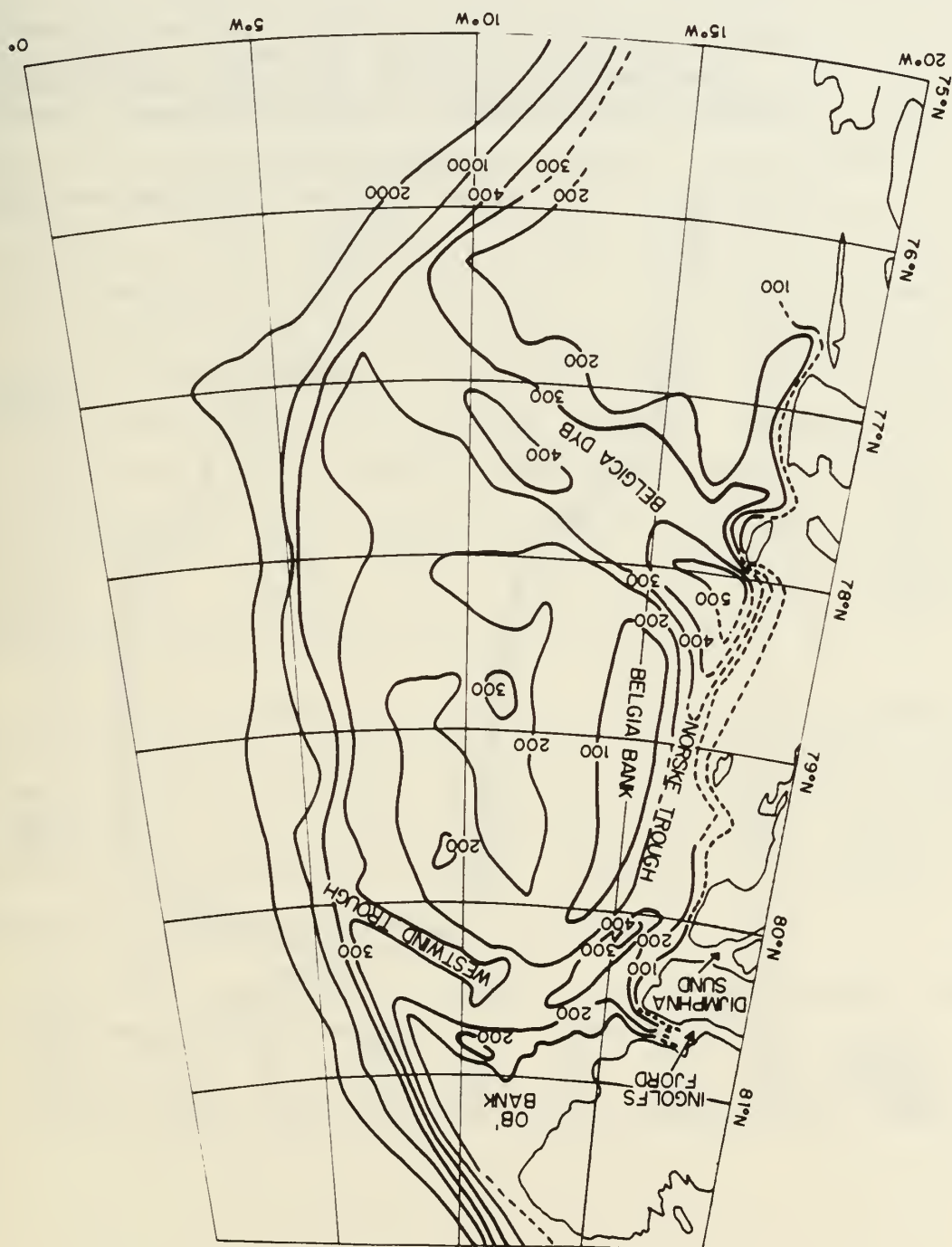
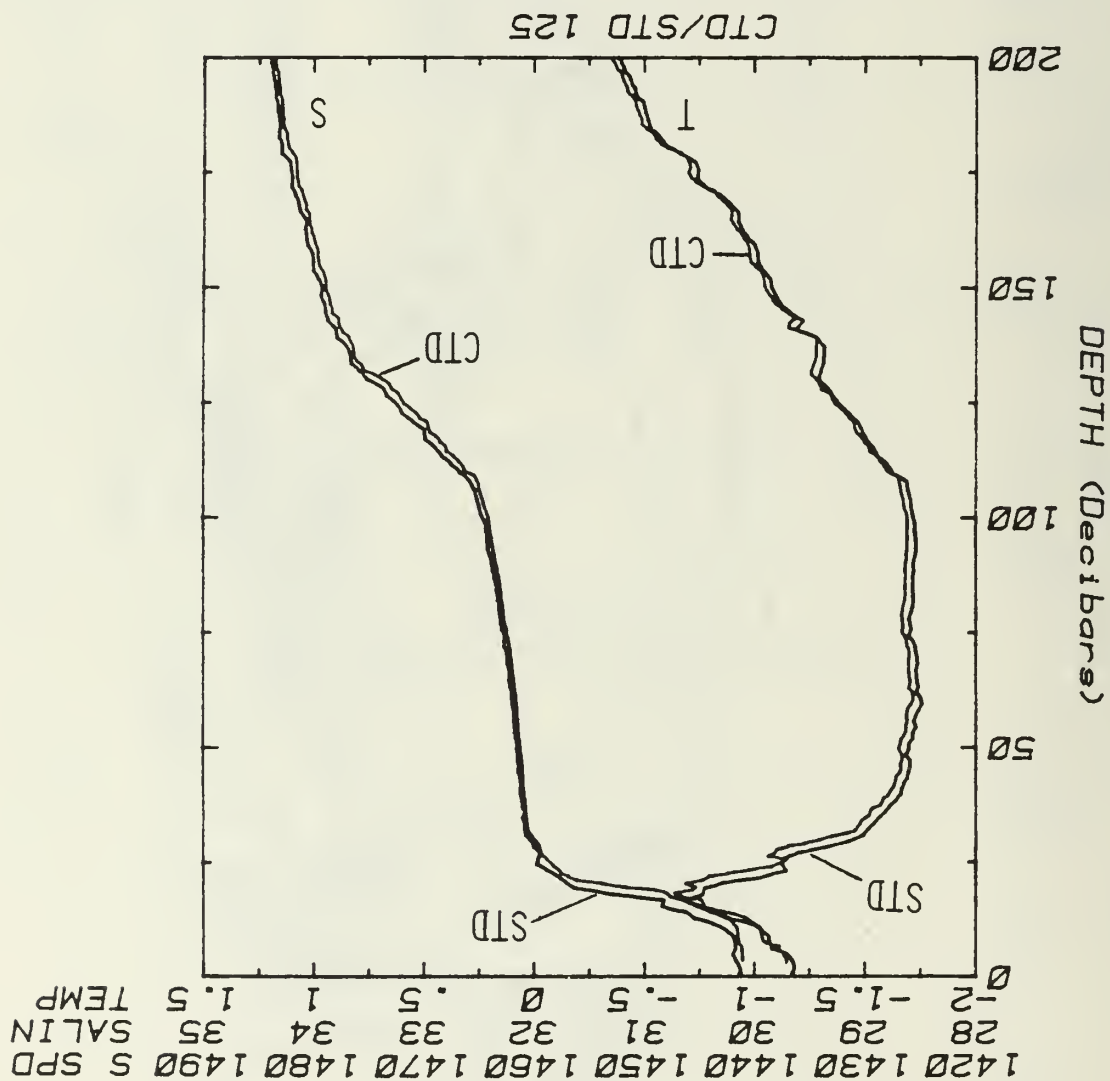


Figure 5. Wind speed and direction measured every 6 hours commencing 22 August 1984.

Figure 6. Bathymetry of the east Greenland continental shelf CTD locations from NORTHWIND 81 and 84 and WESTWIND 79. Soundings are based on water depth at





APPENDIX A

Explanation of Heading Codes

The heading of the printed output uses the coding from NODC Publication M-2, August 1964, with a few exceptions. Heading entries which are not self-explanatory are as follows: MSQ is the Marsden square, and DPTH is the water depth in meters. Wave source direction (WVD) is in tens of degrees, but the direction 00 indicates calm seas due to ice dampening. The significant wave height is coded by Table 10 (code $\div 2$ = height in meters). Wind speed, V, is coded as Beaufort force, Table 17. The barometer is in millibars, less 1000 if more than 3 digits; wet and dry bulb temperatures are in degrees C. The present weather is from Table 21 with cloud type and amount from Tables 25 and 26, respectively. The combination 4 X 9 indicates that clouds cannot be observed usually because of fog conditions. The visibility is from Table 27 which is roughly in powers of two with code 4 = 1-2 km. The ice concentration, ICE, is in tenths; amounts less than one tenth are preceded by a minus sign and indicate concentrations in powers of ten, e.g., 10^{-4} = -4.

The entry, NAV, is a code to identify the accuracy of each station position based upon the navigation system used. Code 1 indicates a position determined by visual sightings, radar or by navigation satellite; Code 2 a position determined by Omega or Loran; and Code 3 a position determined by dead reckoning.

The heading data are listed sequentially with increasing station number.

STATION DATA MIZLANT 84 (ARCTIC EAST 1984)

NAT SHIP	LAT	LONG	MSQ	MO	DY	YR	HR	STA	DPTH	NAV	ICE	WVD	HT	WND	V	BAR	DRY-T	WET	WTHR	CL	AMT	VIS
31 NW	N76-33.6	W003-33.3	253	08	22	84	10.0	1-	2934	1	1	00	0	27	3	010	-02.2	-02.4	2	7	8	7
31 NW	N76-53.1	W003-14.8	253	08	22	84	15.5	2-	1930	1	5	00	0	35	2	009	-00.2	-00.8	2	7	8	
31 NW	N78-39.8	W000-06.3	253	08	23	84	04.7	3-	1058	1	0	00	0	32	5	009			2	7	8	
31 NW	N78-40.0	E002-02.4	288	08	23	84	02.9	4-	2502	1	0	30	2	30	4	009	02.5	01.0	1	6	5	7
31 NW	N78-40.5	E003-57.3	288	08	23	84	10.8	5-	2294	1	0	30	1	31	3	008	01.0	00.1	1	6	5	7
31 NW	N78-38.6	E005-24.3	288	08	23	84	13.2	6-	2349	1	0	31	2	30	3	008	01.0	00.0	1	6	5	7
31 NW	N78-40.6	E006-23.2	288	08	23	84	15.4	7-	1934	1	0	29	2	29	3	008	01.7	00.4	1	6	7	7
31 NW	N78-40.7	E008-07.5	288	08	23	84	18.1	8-	959	1	0	30	2	32	4	008	01.7	01.0	7	6	7	7
31 NW	N78-40.9	E009-21.3	288	08	23	84	20.2	9-	457	1	0			32	4	008			1	6	6	7
31 NW	N78-59.5	E009-07.9	288	08	23	84	22.5	10-	208	1	0			32	4	008			1	6	6	7
31 NW	N78-59.6	E006-52.7	288	08	24	84	00.8	11-	1288	1	0			31	3	009	03.2	03.0	1	6	6	7
31 NW	N78-59.8	E004-50.0	288	08	24	84	03.7	12-	2408	1	0			35	4	010	03.2	03.2	1	6	6	7
31 NW	N78-59.2	E002-35.8	288	08	24	84	06.5	13-	2367	1	1	00	0	32	5	012	01.2	01.2				6
31 NW	N79-07.9	E002-10.5	288	08	24	84	09.4	14-	4031	1	1	00	0	33	4	013	01.5	00.0	1	6	4	6
31 NW	N79-11.9	E002-18.3	288	08	24	84	12.1	15-	4031	1	-2	00	0	28	1	014	01.0	00.5	0		0	
31 NW	N79-15.2	E002-07.4	288	08	24	84	15.0	16-	3757	1	-2	00	0	25	2	015	-01.3	-01.5	4	7	8	3
31 NW	N79-22.9	E001-50.8	288	08	24	84	18.1	17-	3025	1	1	00	0	19	2	015			4	7	8	3
31 NW	N79-31.3	E001-24.9	288	08	24	84	21.1	18-	3080	1		00	0	20	1	015	-00.7	-00.9	4	7	7	6
31 NW	N79-40.9	E001-08.3	288	08	25	84	01.6	19-	2477	1	6	00	0	21	3		-00.7	-01.7	2	7	8	
31 NW	N79-49.0	E000-51.8	288	08	25	84	04.5	20-	2294	1	2	00	0	18	2	013	00.0	-00.5	2	6	8	6
31 NW	N79-56.1	E000-34.6	288	08	25	84	06.2	21-	2586	1	3	00	0	32	3	013	01.0	00.5	2	7	8	7
31 NW	N79-55.1	W000-02.0	253	08	25	84	09.5	22-	3482	1	7	00	0	34	2	013	00.5	-01.0	2	7	8	5
31 NW	N79-53.2	W000-31.2	253	08	25	84	12.1	23-	2751	1	5	00	0	31	2	013	00.5	00.0	2	7	7	6

STATION DATA MIZLANT 84 (ARCTIC EAST 1984)

NAT	SHIP	LAT	LONG	MSQ	MO	DY	YR	HR	STA	DPTH	NAV	ICE	WVD	HT	WND	V	BAR	DRY-T	WET	WTHR	CL	AMT	VIS
31	NW	N79-54.6	W001-07.5	253	08	25	84	14.0	24-	2751	1	2	00	0	00	3	013	00.0	-00.6	2	7	7	6
31	NW	N79-55.0	W001-37.8	253	08	25	84	15.1	25-	2769	1	1	00	0	00	2	013	00.0	-01.0	2	7	7	7
31	NW	N79-56.2	W002-08.0	253	08	25	84	16.5	26-	2751	1	1	00	0	32	2	013	00.0	-01.0	2	7	5	7
31	NW	N79-55.7	W002-19.3	253	08	25	84	17.5	27-	2714	1	5	00	0	34	2	014	-00.5	-01.0	2	7	5	7
31	NW	N79-59.7	W002-50.8	253	08	25	84	19.5	28-	2568	1	2	00	0	20	2		-00.5	-01.0	2	6	7	
31	NW	N79-58.1	W003-31.2	253	08	25	84	21.3	29-	2294	1	2	00	0	20	2				2	6	8	
31	NW	N79-59.6	W004-12.2	253	08	25	84	23.3	30-	1928	1	3	00	0	21	2		-02.2	-02.2	2	6	8	
31	NW	N79-59.8	W005-09.1	253	08	26	84	01.4	31-	1105	1	1	00	0	20	4		-02.8	-03.3	2	6	8	
31	NW	N79-59.8	W006-14.1	253	08	26	84	03.7	32-	328	1	1	00	0	20	3							
31	NW	N79-59.6	W007-06.0	253	08	26	84	05.4	33-	297	1	1	00	0	19	4		-02.2	-02.8	2	6	8	
31	NW	N80-02.8	W007-57.9	901	08	26	84	07.3	34-	249	1	0	00	0	20	4		-02.2	-02.8	2	6	8	
31	NW	N80-13.3	W008-23.0	901	08	26	84	09.1	35-	291	1	2	00	0	20	4	014	-01.0	-01.2	2	6	8	7
31	NW	N80-20.2	W008-36.6	901	08	26	84	10.3	36-	277	1	2	00	0	19	4	012	-01.6	-02.2	2	7	8	7
31	NW	N80-15.2	W009-26.9	901	08	26	84	12.1	37-	310	1	2	00	0	16	2	012	-00.5	-01.7	2	7	8	7
31	NW	N80-11.0	W010-18.5	902	08	26	84	13.4	38-	215	1	1	00	0	20	3	012	-02.8	-04.4	2	7	8	7
31	NW	N80-19.0	W010-17.2	902	08	26	84	14.5	39-	321	1	1	00	0	21	2	012	-01.1	-02.2	2	7	8	7
31	NW	N80-26.3	W010-01.4	902	08	26	84	15.5	40-	297	1	2	00	0	20	2	012	-01.1	-02.2	2	6	8	7
31	NW	N80-32.0	W010-00.9	902	08	26	84	16.4	41-	261	1	4	00	0	26	2	012	-02.7	-02.7	2	7	8	
31	NW	N80-38.5	W009-51.9	901	08	26	84	17.5	42-	244	1	2	00	0	23	2	012	-02.2	-02.7	2	7	8	
31	NW	N80-36.0	W010-30.9	902	08	26	84	18.5	43-	289	2	1	00	0			012			2	7	8	
31	NW	N80-33.6	W011-05.9	902	08	26	84	19.5	44-	255	1	1	00	0	22	3	012	-02.2	-02.7	4	7	8	
31	NW	N80-31.3	W011-37.4	902	08	26	84	20.7	45-	271	1	0	00	0	21	3	012	-02.2	-02.7	2	7	8	
31	NW	N80-26.3	W012-03.9	902	08	26	84	22.2	46-	264	1	2	00	0	20	3	012	-02.2	-02.8	4	7	8	

STATION DATA MIZLANT 84 (ARCTIC EAST 1984)

NAT	SHIP	LAT	LONG	MSQ	MO	DY	YR	HR	STA	DPTH	NAV	ICE	WVD	HT	WND	V	BAR	DRY-T	WET	WTHR	CL	AMT	VIS
31	NW	N80-39.2	W011-05.9	902	08	27	84	00.7	47-	226	1	1	00	0	22	2	012	-03.9	-03.9	4	7	8	3
31	NW	N80-44.9	W010-41.0	902	08	27	84	02.2	48-	81	1	1	00	0	20	2	012	-03.9	-03.9	4	7	8	3
31	NW	N80-48.9	W010-26.7	902	08	27	84	03.4	49-	273	1	1	00	0	18	2	011	-03.3	-03.3	4	7	8	3
31	NW	N80-54.1	W009-40.7	901	08	27	84	05.2	50-	50	1	-2	00	0	20	3	011			4	7	8	
31	NW	N80-53.1	W009-10.6	901	08	27	84	06.2	51-	67	1	1	00	0						4	7	8	
31	NW	N80-58.0	W008-31.5	901	08	27	84	07.2	52-	150	1	1	00	0	19	3				4	7	8	7
31	NW	N81-03.6	W007-50.7	901	08	27	84	08.4	53-	575	1	1	00	0	18	3	010	-01.3	-02.2	4	7	8	7
31	NW	N81-02.2	W008-37.9	901	08	27	84	09.6	54-	147	1	1	00	0	16	4	009	-02.2	-02.8	4	7	8	8
31	NW	N81-03.2	W009-28.7	901	08	27	84	11.2	55-	74	1	-2	00	0	19	4	009	-02.1	-02.5	2	7	8	7
31	NW	N81-00.2	W010-10.7	902	08	27	84	12.2	56-	54	1	1	00	0	18	2	009	-01.1	-01.7	2	7	7	7
31	NW	N80-55.9	W010-57.8	902	08	27	84	13.4	57-	81	1	1	00	0	18	2	009	-01.1	-01.6	2	7	8	7
31	NW	N80-52.0	W011-01.6	902	08	27	84	14.4	58-	233	1	1	00	0	19	3	008	-02.4	-02.4	2	7	8	7
31	NW	N80-48.7	W011-24.0	902	08	27	84	15.4	59-	188	1	1	00	0	17	2	009	-01.7	-02.2	2	7	8	7
31	NW	N80-52.4	W012-09.0	902	08	27	84	16.9	60-	75	1	1	00	0	21	3	008	-02.2	-02.8	2	7	8	7
31	NW	N80-56.1	W011-33.3	902	08	27	84	18.0	61-	138	1	1	00	0	19	3	008	-02.2	-02.8	2	7	8	6
31	NW	N81-00.2	W010-56.8	902	08	27	84	19.0	62-	52	1	1	00	0	17	4	008	-02.2	-02.8	2	7	8	6
31	NW	N81-08.7	W011-03.3	902	08	27	84	20.4	63-	67	1	1	00	0	20	4	007	-02.2	-02.8	2	7	8	6
31	NW	N81-17.4	W011-15.1	902	08	27	84	22.1	64-	55	1	1	00	0	18	4	007	-02.2	-02.8	2	7	8	6
31	NW	N81-17.2	W011-28.8	902	08	27	84	22.6	65-	47	1	1	00	0	20	3	007			2	7	8	6
31	NW	N81-12.0	W011-39.4	902	08	28	84	00.7	66-	41	1	1	00	0	19	4	007			2	7	8	6
31	NW	N81-08.6	W012-13.5	902	08	28	84	02.1	67-	30	1	1	00	0	21	3	007	-01.1	-03.3	2	7	8	6
31	NW	N81-03.5	W012-45.4	902	08	28	84	03.5	68-	28	1	1	00	0	20	3	007			2	7	8	6
31	NW	N80-54.7	W012-28.2	902	08	28	84	05.1	69-	84	1	1	00	0	20	2	007			2	7	8	6

STATION DATA MIZLANT 84 (ARCTIC EAST 1984)

NAT	SHIP	LAT	LONG	MSQ	MO	DY	YR	HR	STA	DPTH	NAV	ICE	WVD	HT	WND	V	BAR	DRY-T	WET	WTHR	CL	AMT	VIS
31	NW	N80-46.2	W011-58.2	902	08	28	84	06.7	70-	103	1	1	00	0	17	4	007	-01.7	-02.2	2	7	8	6
31	NW	N80-50.7	W012-35.4	902	08	28	84	08.2	71-	116	1	1	00	0	22	2	006	-02.5	-02.5	2	7	8	6
31	NW	N80-55.1	W013-05.5	902	08	28	84	10.2	72-	31	1	1	24	1	24	3	006	-00.7	-00.5	2	7	8	6
31	NW	N80-56.0	W013-13.2	902	08	28	84	11.4	73-	22	1	1	21	1	23	2	006	00.0	-01.1	4	7	8	6
31	NW	N80-53.4	W013-31.3	902	08	28	84	13.6	74-	54	1	-2	21	1	21	4	006	00.0	-01.7	2	7	8	6
31	NW	N80-42.8	W014-08.4	902	08	28	84	16.1	75-	15	1	1	00	0			005			2	7	8	6
31	NW	N80-39.8	W013-09.6	902	08	28	84	21.3	76-	209	1	-2	19	1	19	3	004	-02.2	-02.8	2	7	7	6
31	NW	N80-35.3	W013-01.6	902	08	28	84	22.3	77-	297	1	-2	19	1	19	2	004	-01.7	-02.8	2	7	7	6
31	NW	N80-31.4	W012-46.6	902	08	28	84	23.1	78-	290	1	-4	19	1	18	4	006	-02.2	-02.8	2	7	8	6
31	NW	N80-22.9	W012-33.8	902	08	29	84	00.5	79-	206	1	2	00	0	20	4	004	-02.2	-02.8	2	7	8	6
31	NW	N80-25.5	W013-09.3	902	08	29	84	01.8	80-	281	1	-2	00	0	20	2	004	-02.2	-02.8	2	7	8	6
31	NW	N80-27.2	W013-34.4	902	08	29	84	03.0	81-	337	1	1	00	0	19	3	004			2	7	8	6
31	NW	N80-28.8	W014-18.9	902	08	29	84	04.7	82-	322	1	1	00	0	19	3	004			2	7	8	6
31	NW	N80-29.9	W014-40.6	902	08	29	84	05.5	83-	269	1	1	00	0	19	3	004	-02.8	-03.0	2	7	8	6
31	NW	N80-30.2	W015-22.6	902	08	29	84	06.6	84-	157	1	-2	00	0	20	4	003	-01.7	-02.2	2	7	8	6
31	NW	N80-37.2	W016-46.9	902	08	29	84	10.6	85-	291	1	5	00	0	21	2	003	-01.7	-02.2	2	7	8	6
31	NW	N80-35.3	W016-17.9	902	08	29	84	15.0	86-	261	1	0	00	0	29	2	003	-02.8	-03.3	2	7	8	6
31	NW	N80-36.1	W016-43.8	902	08	29	84	16.0	87-	237	1	0	00	0	22	2	003	-02.8	-03.3	2	7	8	6
31	NW	N80-25.7	W015-09.1	902	08	29	84	18.1	88-	272	1	1	00	0	12	3	003	-02.2	-03.3	2	7	8	6
31	NW	N80-22.8	W014-46.6	902	08	29	84	18.9	89-	281	1	-2	00	0	26	2	004	-02.2	-03.3	2	7	8	6
31	NW	N80-21.1	W014-17.6	902	08	29	84	19.6	90-	308	1	-2	00	0	26	2	005	-00.4	-02.2	2	7	8	6
31	NW	N80-19.5	W013-46.3	902	08	29	84	20.5	91-	303	1	-2	00	0	18	2	004	-00.7	-01.7	2	7	8	6
31	NW	N80-19.6	W013-18.6	902	08	29	84	21.3	92-	267	1	-2	00	0	00	0	004	-01.1	-01.7	2	7	8	6

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NAT	SHIP	LAT	LONG	MSQ	MO	DY	YR	HR	STA	DPTH	NAV	ICE	MVD	HT	WND	V	BAR	DRY-T	WET	WTHR	CL	AMT	VIS
31	NW	N80-18.8	W012-24.4	902	08	29	84	22.7	93-	186	1	-2	00	0	20	3	004	-01.7	-02.2	4	7	8	2
31	NW	N80-19.5	W011-31.1	902	08	30	84	00.2	94-	328	1	2	00	0	13	1				2	7	8	6
31	NW	N80-18.3	W010-34.2	902	08	30	84	02.2	95-	271	1	2	00	0	34	2				2	7	8	6
31	NW	N80-14.1	W012-01.4	902	08	30	84	04.9	96-	175	1		00	0	33	3	007			2	7	8	6
31	NW	N80-11.9	W013-25.8	902	08	30	84	06.5	97-	176	1		00	0	35	3	008			2	7	8	6
31	NW	N80-10.7	W014-38.6	902	08	30	84	07.6	98-	298	1		00	0	03	4	009	-01.1	-01.7	2	7	8	6
31	NW	N80-10.5	W014-59.7	902	08	30	84	08.3	99-	385	1		00	0	04	4	010	-01.1	-01.7	1	7	7	6
31	NW	N80-10.2	W015-29.9	902	08	30	84	09.2	100-	390	1	0	00	0	03	3	011	00.0	-01.1	1	7	7	6
31	NW	N80-08.6	W015-53.3	902	08	30	84	09.9	101-	272	1	0	00	0	02	3	012	02.2	00.7	1	4	5	6
31	NW	N80-05.6	W016-39.2	902	08	30	84	11.1	102-	248	1		00	0	02	2	013	01.1	00.0	1	6	7	6
31	NW	N80-06.2	W017-27.3	902	08	30	84	12.8	103-	100	1	-3	00	0	00	0	014	01.7	01.7	2	7	8	6
31	NW	N80-06.1	W015-37.0	902	08	30	84	15.0	104-	429	1	1	03	1	03	5	015	01.7	01.7	1	7	7	6
31	NW	N80-06.6	W014-28.6	902	08	30	84	16.2	105-	188	1	2	02	1	00	5	015	00.0	-01.1	0	8	2	7
31	NW	N80-05.8	W012-47.8	902	08	30	84	18.2	106-	142	1	4	02	1	00	4	016	01.7	00.6	0	0	0	7
31	NW	N80-06.7	W010-48.3	902	08	30	84	20.8	107-	186	1	3	00	0	34	3	016			0	8	2	7
31	NW	N80-05.6	W009-25.3	901	08	30	84	22.7	108-	211	1	3	00	0	31	5	016	-01.1	-01.7	0	8	7	7
31	NW	N79-54.4	W009-23.4	253	08	31	84	00.4	109-	103	1	4	00	0	34	6	016			1	8	7	6
31	NW	N79-54.6	W010-58.7	254	08	31	84	02.0	110-	107	1	4	00	0	35	4	016	-01.7	-02.2	0	8	2	6
31	NW	N79-56.8	W012-47.4	254	08	31	84	04.2	111-	118	1	3	00	0	31	2	016			1	8	2	7
31	NW	N79-55.7	W014-05.9	254	08	31	84	05.8	112-	68	1	1	00	0	11	2	015			1	6	6	7
31	NW	N79-55.7	W015-00.4	254	08	31	84	07.2	113-	173	1	2	00	0	18	2	015	03.3	02.8	1	6	6	7
31	NW	N79-55.1	W016-02.1	254	08	31	84	11.1	114-	251	1	3	00	0	30	2	014	02.2	00.0	0	3	1	7
31	NW	N79-51.7	W016-40.8	254	08	31	84	12.1	115-	137	1	0	00	0	00	0	014	-01.2	-02.1	0	3	1	7

STATION DATA MIZLANT 84 (ARCTIC EAST 1984)

NAT	SHIP	LAT	LONG	MSQ	MO	DY	YR	HR	STA	DPTH	NAV	ICE	WVD	HT	WND	V	BAR	DRY-T	WET	WTHR	CL	AMT	VIS
31	NW	N79-49.2	W017-27.4	254	08	31	84	14.2	116-	346	1	0	00	0	00	0	014	00.7	-00.7	0	3	1	7
31	NW	N79-48.0	W017-35.0	254	08	31	84	15.9	117-	160	1	0	00	0	22	3	013	00.0	01.1	0	3	1	7
31	NW	N79-40.5	W017-25.5	254	08	31	84	17.9	118-	165	1	0	00	0	23	3	014	-04.4	-05.0	0	0	0	7
31	NW	N79-40.2	W016-54.6	254	08	31	84	18.6	119-	285	1	0	00	0	23	3	013	-04.4	-05.0	0	0	0	7
31	NW	N79-40.0	W016-27.1	254	08	31	84	19.4	120-	294	1	0	00	0	20	3	014	-02.2	-03.9	0	0	0	7
31	NW	N79-39.9	W015-50.9	254	08	31	84	20.3	121-	220	1	0	00	0	25	2	014	-01.1	-02.2	0	6	1	7
31	NW	N79-40.1	W015-18.6	254	08	31	84	21.6	122-	99	1	8	00	0	11	2	014	-02.2	-03.3	0	6	1	7
31	NW	N79-40.1	W014-32.8	254	08	31	84	23.7	123-	81	1	6	00	0	30	2	014	-03.3	-03.9	1	6	3	7
31	NW	N79-40.1	W013-46.9	254	09	01	84	01.1	124-	148	1	5	00	0	27	3	013	-02.2	-02.8	1	6	3	7
31	NW	N79-40.3	W012-26.9	254	09	01	84	02.5	125-	202	1	2	00	0	25	2	013	-02.2	-02.8	1	3	4	7
31	NW	N79-40.2	W011-16.2	254	09	01	84	04.2	126-	265	1	2	00	0	32	3	012	-01.7	-02.8	1	3	5	7
31	NW	N79-40.3	W009-24.5	253	09	01	84	06.2	127-	223	1	2	00	0	32	4	011	-02.2	-02.8	1	6	7	6
31	NW	N79-40.7	W007-29.7	253	09	01	84	08.4	128-	215	1	2	32	1	33	4	011	-00.7	-01.7	2	3	7	6
31	NW	N79-39.8	W006-18.1	253	09	01	84	09.6	129-	301	1	-2	34	2	34	4	011	-00.7	-01.7	2	3	7	6
31	NW	N79-40.3	W005-50.5	253	09	01	84	10.3	130-	286	1	-2	33	2	33	7	010	-00.7	-01.7	2	3	7	6
31	NW	N79-39.9	W005-14.4	253	09	01	84	11.4	131-	785	1	1	33	2	33	5	010	-01.7	-02.8	2	3	8	6
31	NW	N79-24.9	W005-25.4	253	09	01	84	13.3	132-	914	1	2	33	1	33	7	010	-02.2	-02.8	2	3	8	6
31	NW	N79-25.7	W006-30.9	253	09	01	84	14.9	133-	243	2	0	33	2	33	7	010	-00.7	-01.7	2	7	8	6
31	NW	N79-25.8	W007-49.8	253	09	01	84	16.2	134-	204	1	0	33	2	32	7	011	-00.7	-01.7	2	7	8	6
31	NW	N79-25.9	W009-31.6	253	09	01	84	19.9	135-	122	1	4	33	2	33	5	012	-01.7	-03.3	2	7	8	6
31	NW	N79-14.8	W011-00.7	254	09	01	84	21.7	136-	235	1		00	0	32	5	012	-01.1	-01.7				
31	NW	N79-25.7	W012-06.5	254	09	01	84	23.4	137-	291	1				31	5		-02.2	-03.3				
31	NW	N79-25.7	W013-29.2	254	09	02	84	00.9	138-	134	1							-02.8	-03.9				

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NAT	SHIP	LAT	LONG	MSQ	MO	DY	YR	HR	STA	DPTH	NAV	ICE	WVD	HT	WND	V	BAR	DRY-T	WET	WTHR	CL	AMT	VIS
31	NW	N79-15.7	W014-40.2	254	09	02	84	03.4	139-	99	1				28	4	009	-08.3	-08.8				
31	NW	N79-14.4	W015-25.0	254	09	02	84	05.5	140-	18	1				27	0		-10.0	-10.6				
31	NW	N79-15.2	W015-45.9	254	09	02	84	07.5	141-	132	1				24	3	006	-06.6	-08.3	0	0	7	
31	NW	N79-18.2	W014-24.6	254	09	02	84	13.4	142-	58	2	6	00	0	29	3	014	-05.5	-06.7	2	3	7	6
31	NW	N79-16.6	W013-56.2	254	09	02	84	14.7	143-	131	2		00	0	25	3	013	00.0	-01.1	2	3	8	7
31	NW	N79-14.6	W012-52.5	254	09	02	84	16.4	144-	198	1		00	0	27	3	013	-00.7	-01.7	2	3	7	7
31	NW	N79-12.1	W011-06.8	254	09	02	84	18.3	145-	244	1				26	3	012	-01.1	-02.2	2	3	7	7
31	NW	N79-11.2	W009-09.9	253	09	02	84	20.9	146-	127	1				31	5	000	01.7	00.0	3	3	7	7
31	NW	N79-11.9	W007-21.2	253	09	02	84	22.9	147-	268	1		35	2	25	7	000	00.0	-01.1	3	3	7	7
31	NW	N79-11.8	W006-43.4	253	09	02	84	23.9	148-	294	1	-2	33	2	33	5	000	-00.7	-01.1	3	3	7	7
31	NW	N79-11.7	W006-17.0	253	09	03	84	00.7	149-	401	1	0						00.0	-00.7				
31	NW	N79-12.7	W005-34.0	253	09	03	84	02.1	150-	1014	1	0			35	6	000	00.0	-00.7	4	3	7	6
31	NW	N79-11.4	W005-02.5	253	09	03	84	03.3	151-	1434	1	0			31	5	000	00.0	-00.7	4	3	7	6
31	NW	N78-54.5	W005-32.7	253	09	03	84	05.5	152-	703	1	1	00	0	03	5	000	00.0	-00.7	4	3	7	6
31	NW	N78-54.3	W006-32.5	253	09	03	84	06.8	153-	301	1		32	2	32	6	000			2	7	8	5
31	NW	N78-53.8	W007-54.9	253	09	03	84	08.5	154-	191	1	1	34	2	34	5	002	-00.7	-01.1	2	7	8	5
31	NW	N78-55.7	W009-31.1	253	09	03	84	10.4	155-	231	1	4	32	1	32	7	003	00.0	-00.7	2	7	8	6
31	NW	N78-58.1	W010-56.0	254	09	03	84	12.0	156-	230	1	1	34	2	34	5	004	01.7	-00.7	2	7	8	6
31	NW	N78-57.0	W012-14.4	254	09	03	84	13.8	157-	178	1	2	33	2	33	4	004	01.1	00.0	2	3	7	6
31	NW	N78-58.1	W013-26.9	254	09	03	84	15.7	158-	185	1	-2	29	2	29	5	003	00.0	-00.7	2	3	7	6
31	NW	N78-57.6	W014-14.7	254	09	03	84	16.4	159-	89	1		00	0	29	4	003	00.7	-00.7	2	3	7	6
31	NW	N78-58.0	W014-45.9	254	09	03	84	18.5	160-	48	2	2	00	0	29	4	004	00.0	-00.7	2	7	7	6
31	NW	N78-51.9	W014-50.0	254	09	03	84	19.9	161-	84	2	4	00	0	32	3	005	00.0	-00.7	2	7	7	6

STATION DATA MIZLANT 84 (ARCTIC EAST 1984)

NAT	SHIP	LAT	LONG	MSQ	MO	DY	YR	HR	STA	DPTH	NAV	ICE	WVD	HT	WND	V	BAR	DRY-T	WET	WTHR	CL	AMT	VIS
31	NW	N78-46.1	W014-14.6	254	09	03	84	22.8	162-	74	1	3			34	4	004	01.7	00.0	2	7	7	6
31	NW	N78-47.3	W013-21.5	254	09	04	84	01.2	163-	119	1	2			33	4	003	01.1	00.0	2	7	7	6
31	NW	N78-45.0	W012-07.9	254	09	04	84	02.8	164-	178	1	-2			34	4	003	01.1	00.0	4	7	7	6
31	NW	N78-47.9	W011-08.2	254	09	04	84	04.4	165-	395	1	-2			31	6	002	01.1	00.0	2	7	7	6
31	NW	N78-48.0	W009-20.8	253	09	04	84	06.8	166-	162	1	1	32	1	32	5	001	00.7	-00.7	2	7	7	6
31	NW	N78-47.8	W007-53.7	253	09	04	84	08.6	167-	190	1	2	30	2	31	6	001	00.7	-00.7	2	7	8	6
31	NW	N78-47.8	W006-30.0	253	09	04	84	10.2	168-	281	1	-3	34	2	34	6	999			2	7	8	6
31	NW	N78-47.9	W005-46.9	253	09	04	84	11.3	169-	364	1	-3	32	2	32	4	999	00.7	00.0	2	7	8	6
31	NW	N78-47.9	W004-59.4	253	09	04	84	12.4	170-	899	1	-3	30	1	31	5	999	00.7	-00.7	2	7	8	6
31	NW	N78-45.1	W004-31.5	253	09	04	84	13.7	171-	1398	1	-2	31	2	31	5	999	00.7	-00.7	2	7	8	6
31	NW	N78-47.7	W003-53.3	253	09	04	84	15.4	172-	2002	1	0	30	2	29	5	000	00.7	-00.7	2	7	8	6
31	NW	N78-31.3	W006-34.3	253	09	04	84	19.1	173-	297	1	-2	33	2	33	4	001	00.0	-00.7	2	7	8	6
31	NW	N78-28.9	W007-57.5	253	09	04	84	20.7	174-	253	1		34	1	34	6	002	00.0	-00.7	2	7	8	6
31	NW	N78-25.5	W009-26.9	253	09	04	84	23.2	175-	267	1	-2			33	5	004	-00.7	-01.1	2	7	8	6
31	NW	N78-26.0	W010-50.4	254	09	05	84	01.7	176-	207	1	-2					005	-00.7	-01.1	2	7	8	6
31	NW	N78-23.9	W012-21.7	254	09	05	84	04.0	177-	203	1	2	00	0	30	4	005	00.0	-00.7	2	7	8	6
31	NW	N78-26.7	W013-20.0	254	09	05	84	05.1	178-	198	1				30	4	006	00.7	00.0	2	7	8	6
31	NW	N78-29.0	W014-24.0	254	09	05	84	08.1	179-	77	1	1	00	0			009	00.7	-00.7	2	7	8	6
31	NW	N78-28.9	W015-35.7	254	09	05	84	10.2	180-	59	2	5	00	0	31	3	009	00.7	00.0	2	7	8	6
31	NW	N78-30.2	W016-16.9	254	09	05	84	11.1	181-	289	1	6	00	0	27	3	009	00.7	00.0	2	7	8	7
31	NW	N78-44.7	W016-14.8	254	09	05	84	12.9	182-	268	1	9	00	0	24	2	009	01.1	-01.7	2	7	8	7
31	NW	N78-44.2	W015-35.8	254	09	05	84	15.6	183-	80	1	9	00	0	33	2	009	01.1	00.7	2	7	8	7
31	NW	N78-05.0	W017-03.2	254	09	05	84	20.8	184-	543	2	7	00	0	00	0	010	00.0	-00.7	2	7	8	7

STATION DATA MIZLANT 84 (ARCTIC EAST 1984)

NAT	SHIP	LAT	LONG	MSQ	MO	DY	YR	HR	STA	DPTH	NAV	ICE	WVD	HT	WND	V	BAR	DRY-T	WET	WTHR	CL	AMT	VIS
31	NW	N78-10.6	W016-24.2	254	09	05	84	22.8	185-	453	2	4	00	0	00	0	010	-00.7	-01.7	2	7	8	7
31	NW	N78-18.8	W016-13.4	254	09	06	84	00.9	186-	335	1	3	00	0	15	2	010	00.0	-00.7	2	7	8	7
31	NW	N78-19.2	W015-31.4	254	09	06	84	02.0	187-	175	1		00	0									
31	NW	N78-08.9	W015-04.0	254	09	06	84	03.7	188-	187	1	9	00	0	13	4		-00.7	-01.7	2	7	8	7
31	NW	N78-19.0	W014-16.3	254	09	06	84	06.1	189-	117	1				14	2				2	7	8	7
31	NW	N78-21.2	W013-11.9	254	09	06	84	07.6	190-	169	1	2	00	0	16	2	011	00.0	-00.7	2	7	8	7
31	NW	N78-19.2	W012-15.3	254	09	06	84	09.1	191-	210	1	4	00	0	15	2	012	00.7	-00.7	2	7	8	7
31	NW	N78-11.7	W011-29.6	254	09	06	84	10.5	192-	163	1	-2	00	0	15	3	013	-00.7	-01.1	1	3	6	7
31	NW	N78-10.8	W010-05.0	254	09	06	84	13.6	193-	185	1	4	00	0	18	3	013	02.2	00.0	1	3	5	7
31	NW	N78-10.6	W008-32.4	253	09	06	84	15.5	194-	246	1	-2	00	0	18	2	014	02.8	01.1	1	3	7	7
31	NW	N78-10.9	W007-10.0	253	09	06	84	17.1	195-	226	1	2	00	0	23	3	014	01.1	00.0	1	3	6	7
31	NW	N78-10.8	W006-20.1	253	09	06	84	18.6	196-	340	1	6	00	0	24	2	014	00.7	00.0	2	3	8	7
31	NW	N78-11.2	W005-33.1	253	09	06	84	19.5	197-	355	1	-2	00	0			014	00.0	-00.7	1	3	7	7
31	NW	N78-11.9	W004-58.4	253	09	06	84	20.9	198-	1041	1	-2	00	0	22	2	014	-00.7	-01.1	1	3	7	7
31	NW	N78-10.9	W004-35.6	253	09	06	84	21.8	199-	1654	1	-2	00	0	23	2	014	-00.7	-01.1	2	7	8	5
31	NW	N78-11.1	W004-14.0	253	09	06	84	22.8	200-	2111	1	-2	00	0	21	2	014	00.0	-00.7	2	7	8	5
31	NW	N78-10.2	W003-46.6	253	09	06	84	23.9	201-	2001	1	-2	00	0			013	01.1	00.0	2	7	8	5
31	NW	N77-53.9	W003-48.9	253	09	07	84	02.4	202-	2751	1	-2	00	0	21	2	013	00.0	-00.7	2	7	8	5
31	NW	N77-54.2	W003-28.8	253	09	07	84	03.6	203-		1	-2	00	0			013	.	.	2	7	8	5
31	NW	N77-53.9	W004-12.2	253	09	07	84	05.2	204-	2476	1	1	00	0	22	3	012	00.0	-00.7	2	7	8	5
31	NW	N77-54.4	W004-38.1	253	09	07	84	06.3	205-	2020	1	1	00	0	23	3	012	-00.7	-01.1	2	7	8	6
31	NW	N77-54.2	W005-01.8	253	09	07	84	07.4	206-	1032	1		00	0	25	4	012	.	.	2	7	8	6
31	NW	N77-54.6	W005-30.7	253	09	07	84	08.3	207-	356	1	2	00	0	23	3	012	-00.7	-01.1	2	7	8	7

STATION DATA MIZLANT 84 (ARCTIC EAST 1984)

NAT	SHIP	LAT	LONG	MSQ	MO	DY	YR	HR	STA	DPTH	NAV	ICE	WVD	HT	WND	V	BAR	DRY-T	WET	WTHR	CL	AMT	VIS
31	NW	N77-55.1	W006-19.6	253	09	07	84	09.6	208-	370	2	4	00	0	22	2	012	00.7	-00.7	2	7	8	7
31	NW	N77-55.7	W007-05.0	253	09	07	84	11.4	209-	334	1	3	00	0	23	2	012	00.0	-00.7	2	7	8	7
31	NW	N77-53.9	W008-28.9	253	09	07	84	16.2	210-	225	2	2	00	0	23	2	012	00.0	-00.7	2	7	8	6
31	NW	N77-53.9	W009-06.7	253	09	07	84	18.9	211-	232	2	-2	00	0	27	3	011	-00.1	-01.1	4	7	8	4
31	NW	N77-55.6	W011-41.4	254	09	07	84	20.8	212-	203	1	5	00	0	29	2	011	-02.2	-02.8	4	7	8	4
31	NW	N77-43.8	W011-29.5	254	09	07	84	23.0	213-	224	1	2	00	0	26	2	011	-03.3	-03.9	1	4	5	6
31	NW	N77-56.5	W012-33.8	254	09	08	84	03.1	214-	146	2	00	0	29	2	009	-03.3	-03.9	2	7	8	5	
31	NW	N78-05.5	W013-31.5	254	09	08	84	06.8	215-	112	2	00	0	31	2	008	-01.1	-01.7	2	7	8	5	
31	NW	N78-13.4	W013-30.1	254	09	08	84	08.1	216-	110	2	3	00	0	03	2	008	-01.7	-02.2	2	7	8	5
31	NW	N78-09.2	W014-28.2	254	09	08	84	09.3	217-	114	2	2	00	0	01	3	008	-01.7	-02.2	2	7	8	5
31	NW	N78-00.2	W014-54.0	254	09	08	84	10.3	218-	420	1	1	00	0	02	3	007	-01.1	-01.7	2	7	8	5
31	NW	N77-54.8	W015-38.3	254	09	08	84	11.4	219-	481	2	3	00	0	34	3	007	-01.7	-02.2	2	7	8	7
31	NW	N77-54.1	W016-15.1	254	09	08	84	12.8	220-	435	2	1	00	0	33	2	007	-01.7	-02.2	2	7	8	7
31	NW	N77-49.3	W016-44.4	254	09	08	84	14.2	221-	353	1	4	00	0	35	2	006	-02.2	-02.8	2	7	8	7
31	NW	N77-46.8	W017-22.8	254	09	08	84	15.3	222-	105	1	4	00	0	32	3	006	-01.7	-01.7	2	7	8	7
31	NW	N77-50.5	W014-27.4	254	09	08	84	16.8	223-	262	2	4	00	0	26	2	005	-01.7	-02.8	2	7	8	7
31	NW	N77-40.3	W017-25.3	254	09	08	84	18.2	224-	46	2	4	00	0	32	2	005	-01.1	-02.2	2	7	8	7
31	NW	N77-31.5	W018-10.9	254	09	08	84	20.2	225-	265	2	4	00	0	27	2	004	01.1	00.0	2	7	8	7
31	NW	N77-31.5	W017-40.6	254	09	08	84	21.2	226-	335	2	00	0										
31	NW	N77-31.9	W017-06.0	254	09	08	84	22.3	227-	324	2	00	0	34	2	004							
31	NW	N77-32.2	W016-27.8	254	09	08	84	23.8	228-	283	2	3	00	0	33	3	003						
31	NW	N77-35.9	W015-44.0	254	09	09	84	01.0	229-	339	2	00	0	36	3	003	-01.1	-01.7					
31	NW	N77-44.4	W015-28.2	254	09	09	84	02.2	230-	392	1	00	0	01	4	003							

STATION DATA MIZLANT 84 (ARCTIC EAST 1984)

NAT	SHIP	LAT	LONG	MSQ	MO	DY	YR	HR	STA	DPTH	NAV	ICE	WVD	HT	WND	V	BAR	DRY-T	WET	WTHR	CL	AMT	VIS
31	NW	N76-45.3	W009-26.8	253	09	10	84	18.8	254-	320	2	10	00	0	21	2	999	-01.7	-02.2	4	0	4	
31	NW	N76-44.3	W009-55.4	253	09	10	84	21.2	255-	277	1	5	00	0	00	0	999	-03.3	-04.0	1	3	1	4
31	NW	N76-38.0	W010-33.2	254	09	10	84	23.7	256-	279	2	5	00	0	28	2	000	-03.3	-04.0	4	0	4	
31	NW	N76-50.7	W010-19.7	254	09	11	84	28.5	257-	285	2	00	0	29	2								
31	NW	N77-03.9	W010-10.1	254	09	11	84	03.3	258-	442	2	9	00	0			000						
31	NW	N76-58.9	W009-40.0	253	09	11	84	04.9	259-	364	1	4	00	0	21	2	001	-02.2	-03.3				
31	NW	N76-52.4	W009-07.6	253	09	11	84	06.7	260-	355	2	9	00	0	31	3	001	-03.3	-03.9	4	7	8	4
31	NW	N76-43.1	W008-31.1	253	09	11	84	09.7	261-	355	1	9	00	0	30	4	002	-03.9	-04.5	4	7	8	2
31	NW	N76-36.4	W007-57.7	253	09	11	84	11.8	262-	326	1	4	00	0	28	3	002	-03.3	-03.9	4	7	8	4
31	NW	N76-30.2	W007-26.8	253	09	11	84	14.4	263-	842	1	7	00	0	27	3	002	-02.8	-03.3	2	7	8	5
31	NW	N76-21.3	W006-56.4	253	09	11	84	17.4	264-	1361	2	1	00	0			008	-02.7	-03.3	2	7	8	6
31	NW	N76-18.8	W006-34.3	253	09	11	84	19.0	265-	2203	2	0	29	1	30	3	004	-02.7	-03.3	2	7	8	7
31	NW	N76-15.8	W006-21.5	253	09	11	84	19.9	266-	2458	1	0	21	2	31	3	004			2	7	8	7
31	NW	N76-30.2	W005-42.6	253	09	11	84	22.1	267-	2164	2	0	25	1	25	4	005	-04.0	-04.0	2	7	8	7
31	NW	N76-55.1	W004-33.2	253	09	12	84	00.9	268-	1508	1	0	28	1	28	2	005	-01.7	-02.2				
31	NW	N77-17.4	W003-38.2	253	09	12	84	03.9	269-	2843	2	-2	29	2	29	3	005	-00.7	-01.1				
31	NW	N77-29.9	W003-00.0	253	09	12	84	05.7	270-	3013	2	0			29	2							
31	NW	N77-29.4	W003-31.7	253	09	12	84	07.3	271-	2934	1	0											
31	NW	N77-30.7	W004-02.3	253	09	12	84	08.4	272-		2	0	00	0	28	3	008	00.0	-00.7	2	7	8	6
31	NW	N77-26.6	W004-19.6	253	09	12	84	09.6	273-	1526	2	5	00	0	30	3	008	-01.0	-01.7	2	6	8	6
31	NW	N77-29.6	W004-37.2	253	09	12	84	11.6	274-	1408	1	5	00	0	30	4	008	-01.1	-01.1	2	6	8	6
31	NW	N77-30.7	W005-01.8	253	09	12	84	12.9	275-	1197	2	4	00	0	39	2	009	-01.7	-01.7	2	6	8	6
31	NW	N77-29.7	W005-49.3	253	09	12	84	14.4	276-	374	2	3	00	0	28	3	009	-01.7	-02.2	2	7	8	6

STATION DATA MIZLANT 84 (ARCTIC EAST 1984)

NAT	SHIP	LAT	LONG	MSQ	MO	DY	YR	HR	STA	DPTH	NAV	ICE	WVD	HT	WND	V	BAR	DRY-T	WET	WTHR	CL	AMT	VIS
31	NW	N77-29.8	W006-33.4	253	09	12	84	15.6	277-	249	2	4	00	0	28	2	008	-02.2	-02.2	1	6	1	6
31	NW	N77-23.6	W005-56.2	253	09	12	84	17.0	278-	288	2	2	00	0	27	2	009			2	6	7	6
31	NW	N77-17.7	W005-22.0	253	09	12	84	18.2	279-	904	2	5	00	0	26	2	009	-02.2	-02.8	2	6	8	5
31	NW	N77-14.7	W005-03.4	253	09	12	84	19.7	280-	1197	2	2	00	0	26	2	010	-03.3	-04.0	4	7	8	4
31	NW	N77-12.1	W004-47.7	253	09	12	84	21.3	281-	1389	2	3	00	0	22	2	011	-05.0	-05.0	4	7	8	3
31	NW	N77-08.2	W004-15.9	253	09	12	84	23.6	282-	1654	2	0			23	3	012	-04.5	-04.5	4	7	8	3
31	NW	N77-01.9	W003-42.4	253	09	13	84	01.1	283-	1928	2	30	1					-03.9	-04.5				
31	NW	N76-59.9	W004-16.7	253	09	13	84	02.9	284-	1745	2				18	4		-01.7	-02.8				
31	NW	N77-00.4	W004-41.4	253	09	13	84	03.9	285-	1608	2												
31	NW	N76-59.9	W005-01.9	253	09	13	84	04.8	286-	1462	2	0											
31	NW	N76-59.8	W005-22.1	253	09	13	84	06.1	287-	1306	2	4	00	0	20	3	015	-01.7	-02.2	0	0	0	7
31	NW	N76-59.9	W005-43.7	253	09	13	84	08.0	288-	1073	2	4	00	0	18	3	018	00.0	-00.7	0	0	0	7
31	NW	N76-59.9	W006-07.3	253	09	13	84	09.5	289-	0624	2	4	00	0	14	3	019	00.7	-00.7	0	0	0	7
31	NW	N76-58.0	W006-40.1	253	09	13	84	11.8	290-	0268	1	8	00	0	16	3	020	02.2	00.0	0	0	0	7
31	NW	N76-57.5	W007-15.7	253	09	13	84	13.1	291-	0314	2	6	15	1	15	3	020	01.1	00.0	0	0	0	7
31	NW	N76-54.6	W006-30.1	253	09	13	84	14.7	292-	0385	2	5	15	1	15	4	022	01.7	00.0	1	3	3	7
31	NW	N76-51.3	W006-05.2	253	09	13	84	16.3	293-	1105	2	10	00	0	17	3	022			1	5	4	7
31	NW	N76-48.6	W005-40.0	253	09	13	84	17.9	294-	1562	2	7	00	0	18	2	023	00.0	-00.7	2	6	8	5
31	NW	N76-46.0	W005-21.2	253	09	13	84	19.1	295-	1690	2	-2	16	1	16	3	024	00.7	00.0	2	3	8	7
31	NW	N76-43.8	W004-49.6	253	09	13	84	20.2	296-	1745	1	0	16	1	16	4	024			2	7	8	6
31	NW	N76-40.1	W004-12.3	253	09	13	84	21.6	297-	2568	1	0			17	3	025	02.2	01.7	2	7	8	6
31	NW	N76-39.4	W004-55.5	253	09	13	84	23.0	298-	2075	1	0			14	4	024	02.2	01.1	2	7	8	6
31	NW	N76-41.0	W005-29.5	253	09	14	84	00.3	299-	2020	1	0			17	1	025	02.2	01.1	2	7	8	6

STATION DATA MIZLANT 84 (ARCTIC EAST 1984)

NAT SHIP	LAT	LONG	MSQ	MO	DY	YR	HR	STA	DPTH	NAV	ICE	WVD	HT	WND	V	BAR	DRY-T	WET	WTHR	CL	AMT	VIS
31 NW	N76-33.4	W006-03.6	253	09	14	84	02.1	300-	1928	2	0			15	3	025	02.2	01.1	2	7	8	6
31 NW	N76-31.2	W006-27.1	253	09	14	84	03.3	301-	1745	2							02.0	01.0				
31 NW	N76-25.8	W006-39.2	253	09	14	84	04.6	302-	1782	2	0					024	02.0	01.0	2			
31 NW	N76-21.3	W007-00.3	253	09	14	84	05.7	303-		2	5			10	4		01.1	00.7	2			
31 NW	N76-18.3	W006-40.0	253	09	14	84	06.9	304-	2111	2	0					025			2			
31 NW	N76-20.2	W006-47.2	253	09	14	84	07.6	305-	1928	2	2			11	3	025			2	7	8	7
31 NW	N76-22.3	W007-09.9	253	09	14	84	09.9	306-	1288	2	7	00	0	08	3	025	02.2	01.7	2	7	8	6
31 NW	N76-28.2	W007-36.7	253	09	14	84	11.9	307-	0768	1	3	00	0	08	3	025	01.7	00.7	2	7	8	6
31 NW	N76-32.0	W007-52.1	253	09	14	84	13.0	308-	0329	1	5	00	0	06	3	025	01.7	00.7	2	7	8	6
31 NW	N76-40.2	W008-20.5	253	09	14	84	14.6	309-	0334	2	8	00	0	07	3	025	01.7	01.1	2	7	8	6
31 NW	N76-25.7	W009-18.6	253	09	14	84	18.3	310-	0284	1	7	00	0	07	3	025	00.7	00.0	2	7	8	6
31 NW	N76-18.4	W008-50.5	253	09	14	84	20.3	311-	0285	2	4	00	0	04	3	023	02.2	01.1	2	7	8	6
31 NW	N76-13.5	W008-44.5	253	09	14	84	21.4	312-	0630	2	3	00	0	06	4	022	02.2	01.7	4	7	8	6
31 NW	N76-09.4	W008-32.6	253	09	14	84	23.5	313-	1014	2	1			04	2	021	01.1	00.7	4	7	8	6
31 NW	N76-04.3	W008-16.5	253	09	15	84	02.5	314-	1471	2	-2	17	2	05	4	020	01.5	01.5	2	7	8	6
31 NW	N75-59.8	W008-02.4	253	09	15	84	03.8	315-	1000	2		17	1	04	3	019	00.7	00.7	2	7	8	6
31 NW	N76-00.0	W008-24.3	253	09	15	84	04.7	316-	1471	2				05	2	019	01.1	00.7	4	7	8	6
31 NW	N76-00.4	W008-39.3	253	09	15	84	05.9	317-	1375	2	0			06	2	019	01.1	00.7	4	7	8	6
31 NW	N76-00.1	W008-52.8	253	09	15	84	06.6	318-	1270	2	0			10	2	019	01.1	00.7	4	7	8	6
31 NW	N75-59.9	W009-07.4	253	09	15	84	07.5	319-	1105	2		10	1	07	2	019			4	7	8	6
31 NW	N76-00.0	W009-18.5	253	09	15	84	08.2	320-	0932	2				01	3	019	00.7	00.7	4	7	8	6
31 NW	N75-59.5	W009-29.1	253	09	15	84	08.8	321-	367	2	0	10	1	08	4	019	00.7	00.7	4	7	8	1
31 NW	N75-59.8	W009-50.5	253	09	15	84	10.1	322-	487	2	1	00	0	10	3	019	00.7	00.7	4	7	8	1

STATION DATA MIZLANT 84 (ARCTIC EAST 1984)

NAT	SHIP	LAT	LONG	MSQ	MO	DY	YR	HR	STA	DPTH	NAV	ICE	WVD	HT	WND	V	BAR	DRY-T	WET	WTHR	CL	AMT	VIS
31	NW	N76-00.0	W010-12.0	254	09	15	84	11.2	323-	295	2	2	00	0	12	3	019	00.7	00.7	4	7	8	1
31	NW	N75-59.7	W010-51.2	254	09	15	84	13.0	324-	300	2	5	00	0	12	3	018	03.3	02.8	4	7	8	1
31	NW	N76-00.0	W011-30.5	254	09	15	84	15.0	325-	224	2	3	00	0	11	3	018	02.2	02.2	4	7	8	1
31	NW	N75-52.5	W011-25.5	254	09	15	84	18.3	326-	302	2	4	00	0	10	5	016			4	7	8	1
31	NW	N75-47.6	W011-09.2	254	09	15	84	19.8	327-	361	1	6	00	0	11	5	015	00.7	-00.7	2	7	8	4
31	NW	N75-44.1	W010-56.4	254	09	15	84	20.8	328-	564	1	1	00	0	10	5	015	00.7	00.0	4	7	8	1
31	NW	N75-39.9	W010-42.8	254	09	15	84	22.3	329-	949	1	1	00	0	11	4	015	01.7	01.7	4	7	8	2
31	NW	N75-36.2	W010-31.6	254	09	15	84	23.9	330-	1380	1	2	11	2	13	4	013	02.8	02.2	4	7	8	2
31	NW	N75-32.7	W010-18.3	254	09	16	84	01.7	331-	1727	2	-2	13	1	13	6	012			4	7	8	2
31	NW	N75-27.4	W010-00.1	254	09	16	84	03.4	332-	2203	2	-2	13	1	13	6	012			4	7	8	2
31	NW	N75-23.6	W009-47.6	253	09	16	84	04.5	333-	2659	2	0	13	2	13	6	012	03.3	02.8	4	7	8	2

APPENDIX B

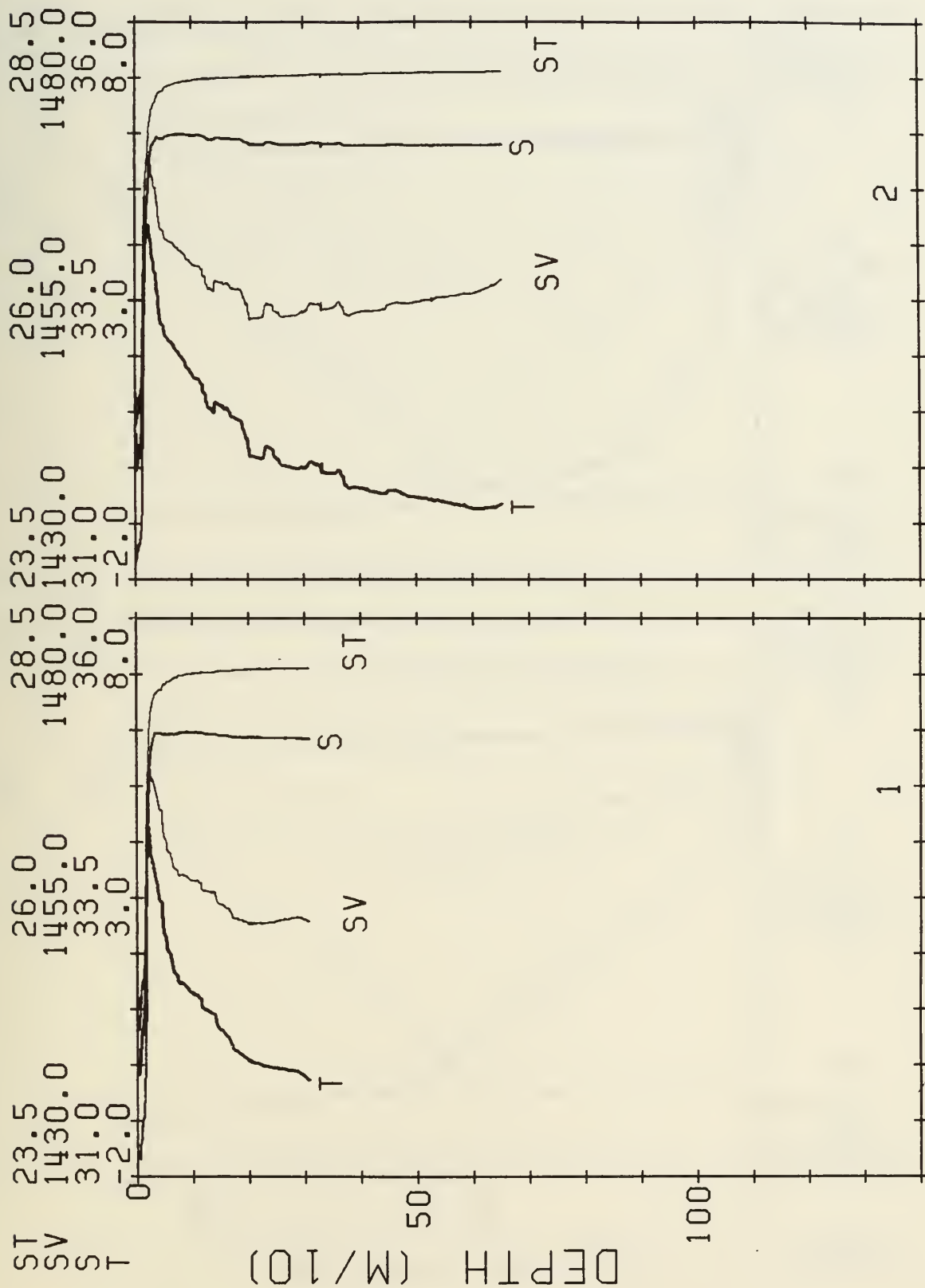
Property Profiles For MIZLANT 84 Stations

This section contains plots of temperature, salinity, sound speed, and sigma-t for the 333 stations of MIZLANT 84 which were successfully recovered from the cassette tapes of the data logging system. Three stations were not recoverable: 104, 206, and 279. Raw temperature and salinity profile plots for these stations are available but are not included in this report. Down and up traces were obtained at about half the stations, mostly during the first part of the cruise. Only the down casts are presented in this report.

Because of the small range of properties for those stations well within the ice pack and the large difference in properties between shallow and deep water stations, it was necessary to use expanded T, S, and D scales. This has necessitated variable scaling to be used in all three parameters. The shallow-water stations are plotted four per page while the deep-water stations are shown two per page. To assist in distinguishing between curves the temperature profile has been darkened three times while the salinity trace only twice. The curves are also labeled: T for temperature, S for salinity, SV for sound velocity, and ST for sigma-t.

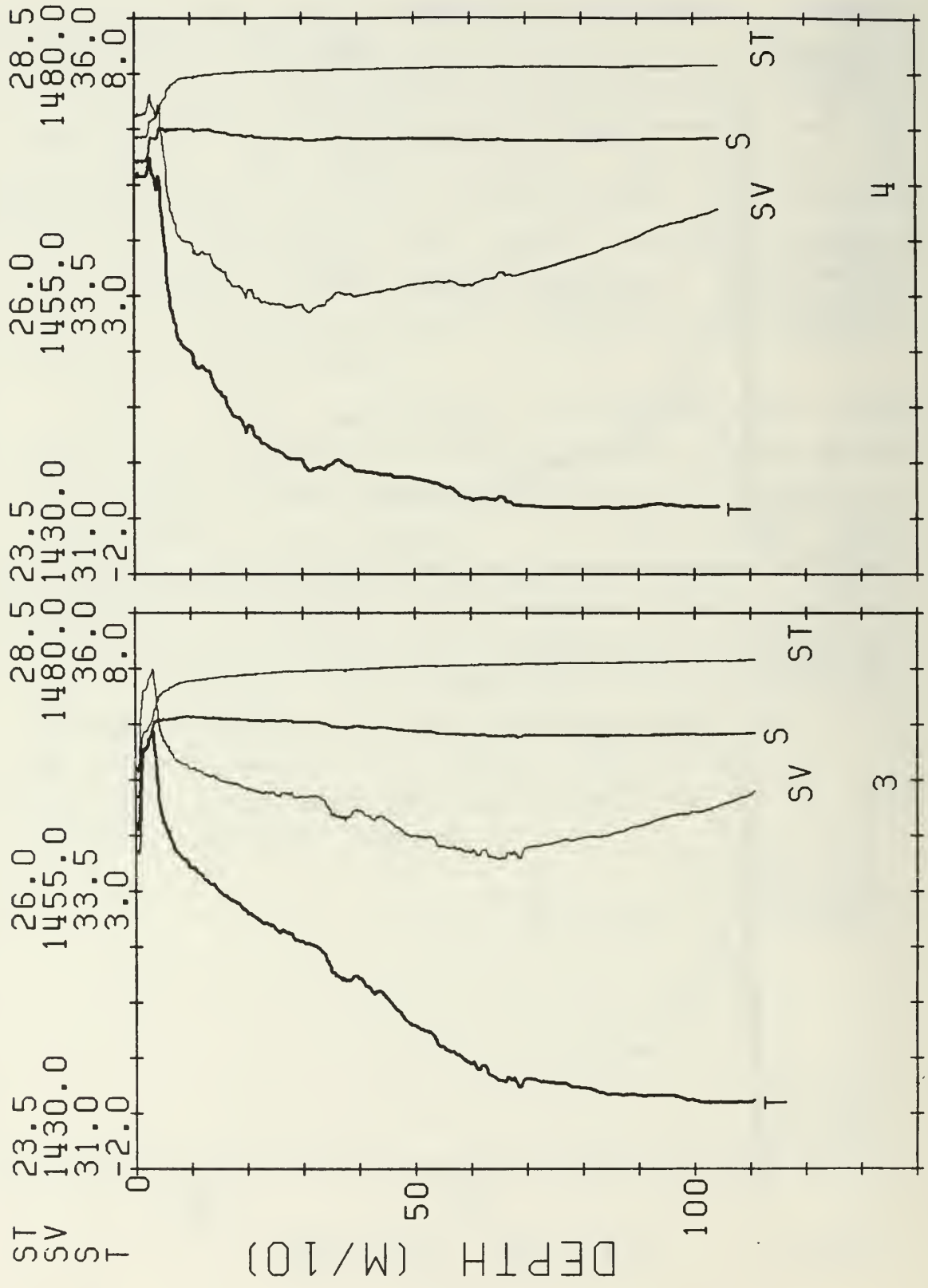
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M/SEC
P.P.T.
DEG C

MIZLANT 84 CTD STATIONS



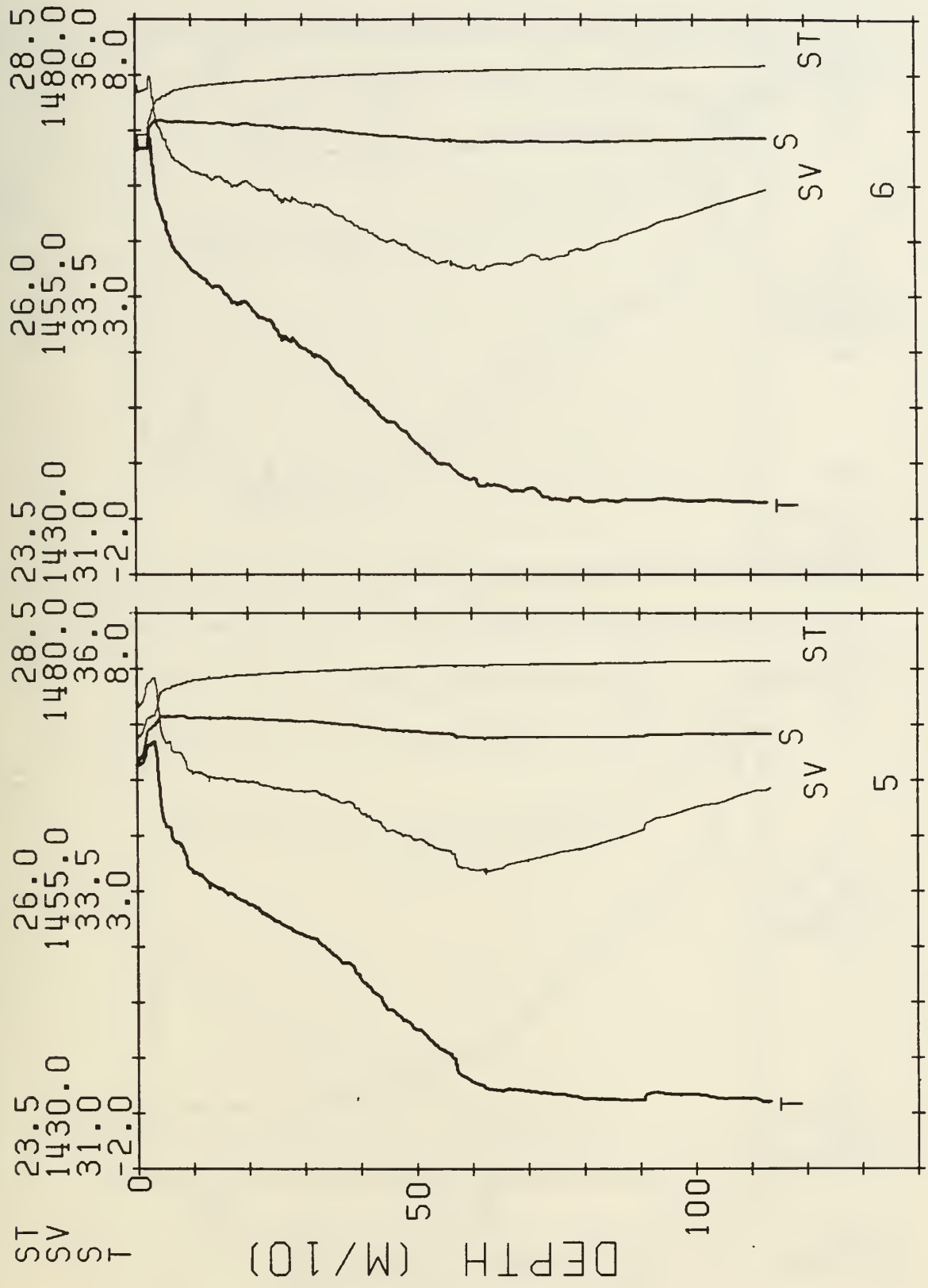
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MIZLANT 84 CTD STATIONS



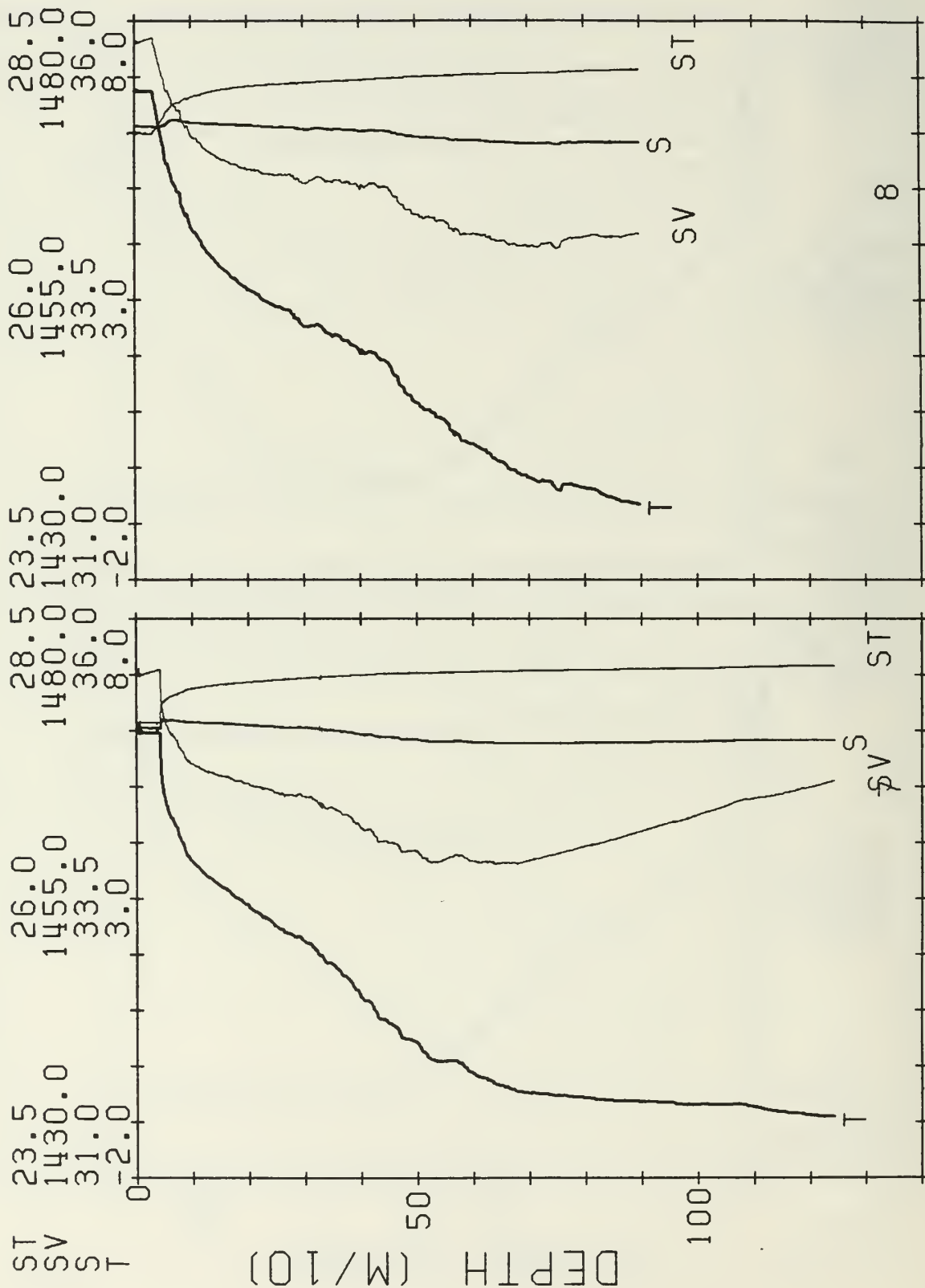
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MIZLANT 84 CTD STATIONS



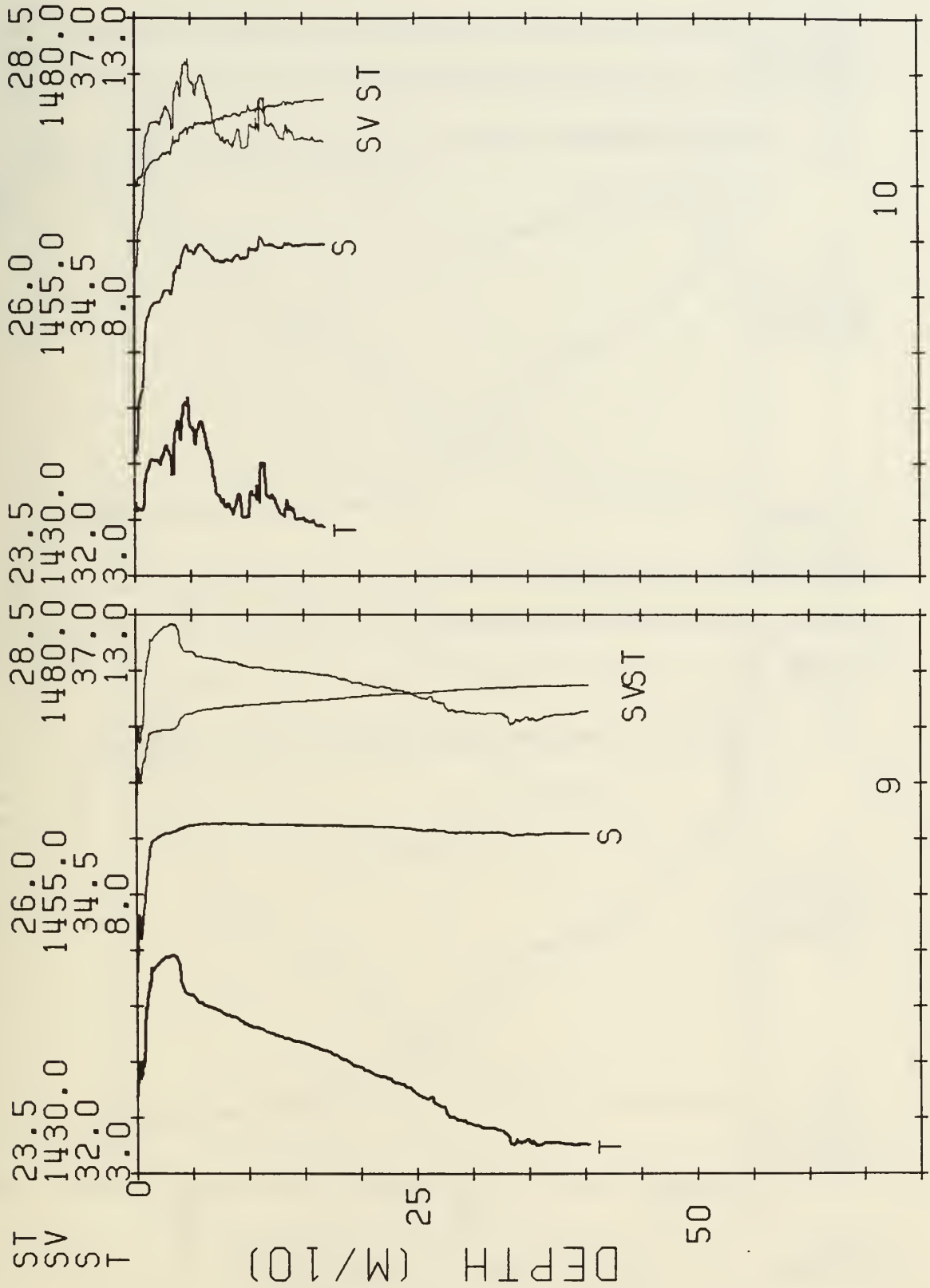
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M/SEC
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DEG C

MIZLANT 84 CTD STATIONS



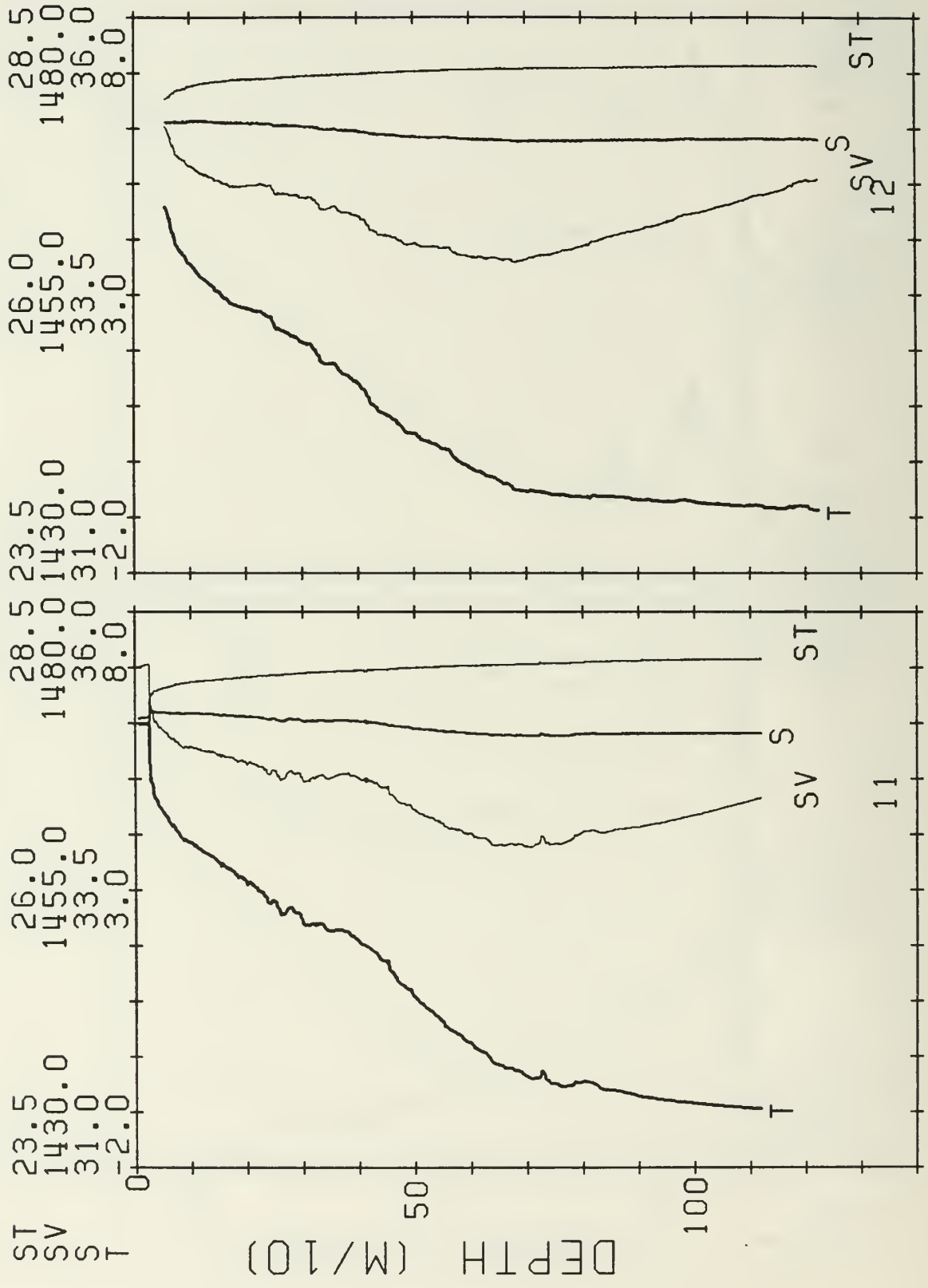
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DEG.C

MIZLANT 84 CTD STATIONS



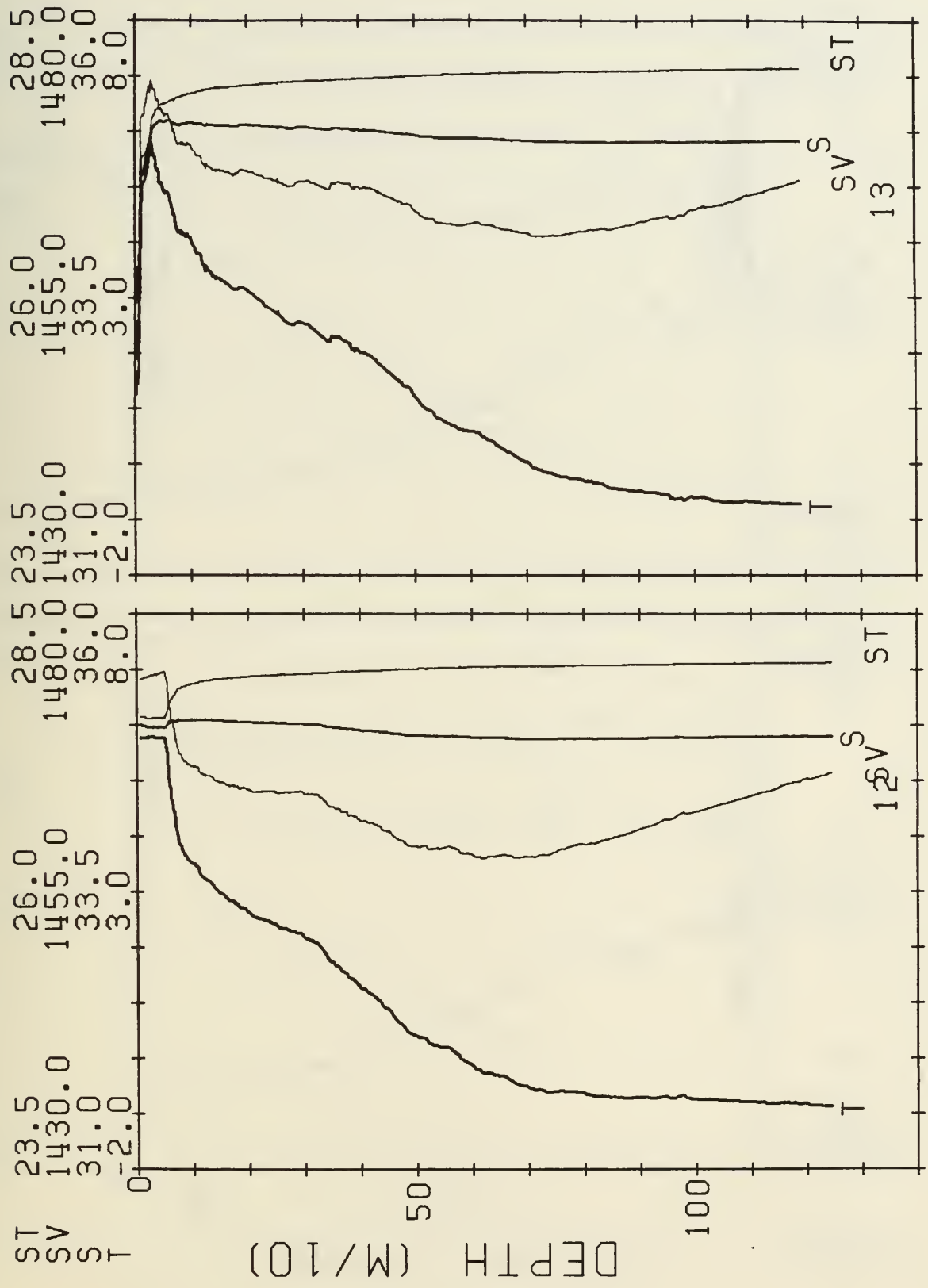
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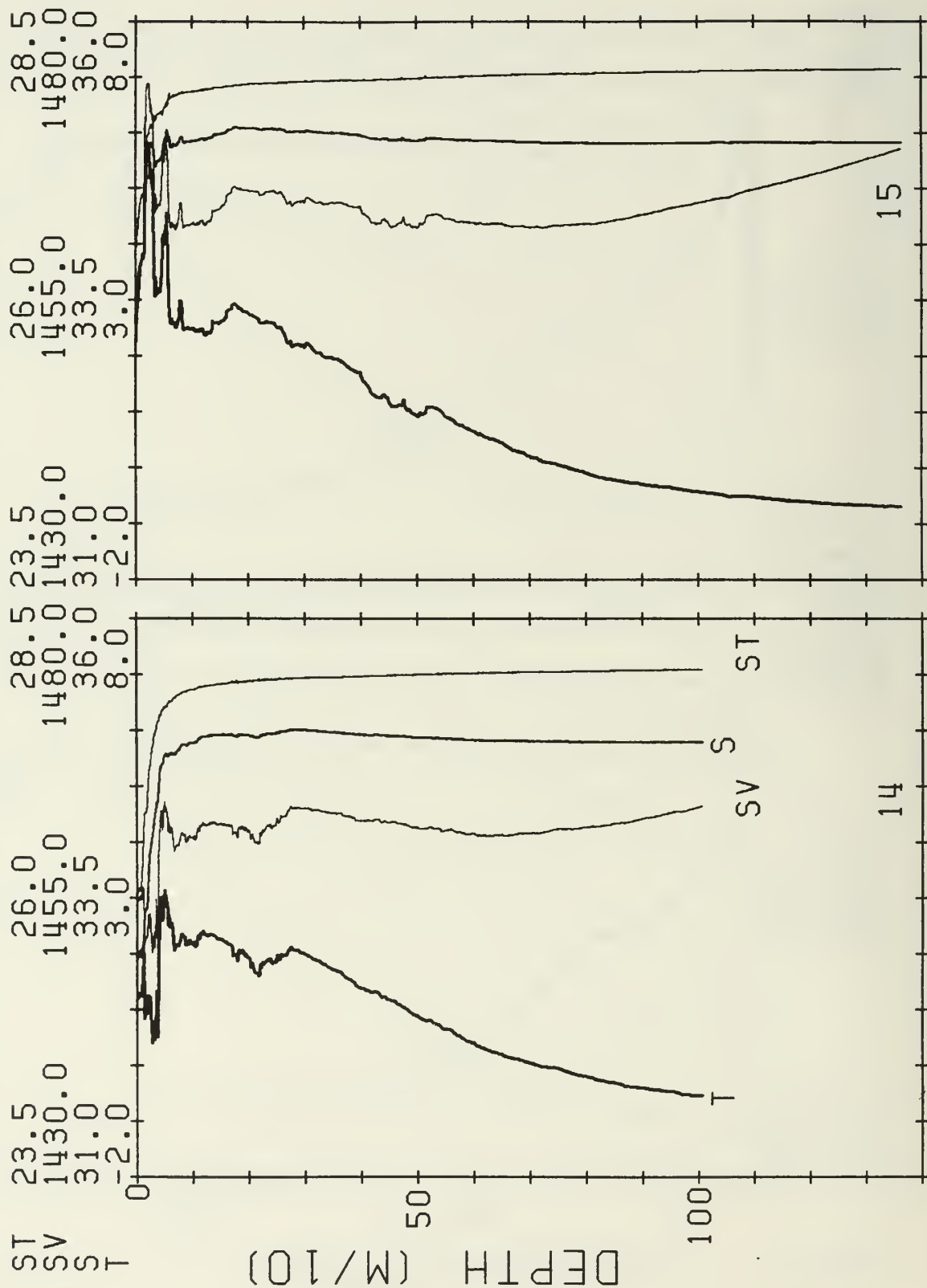
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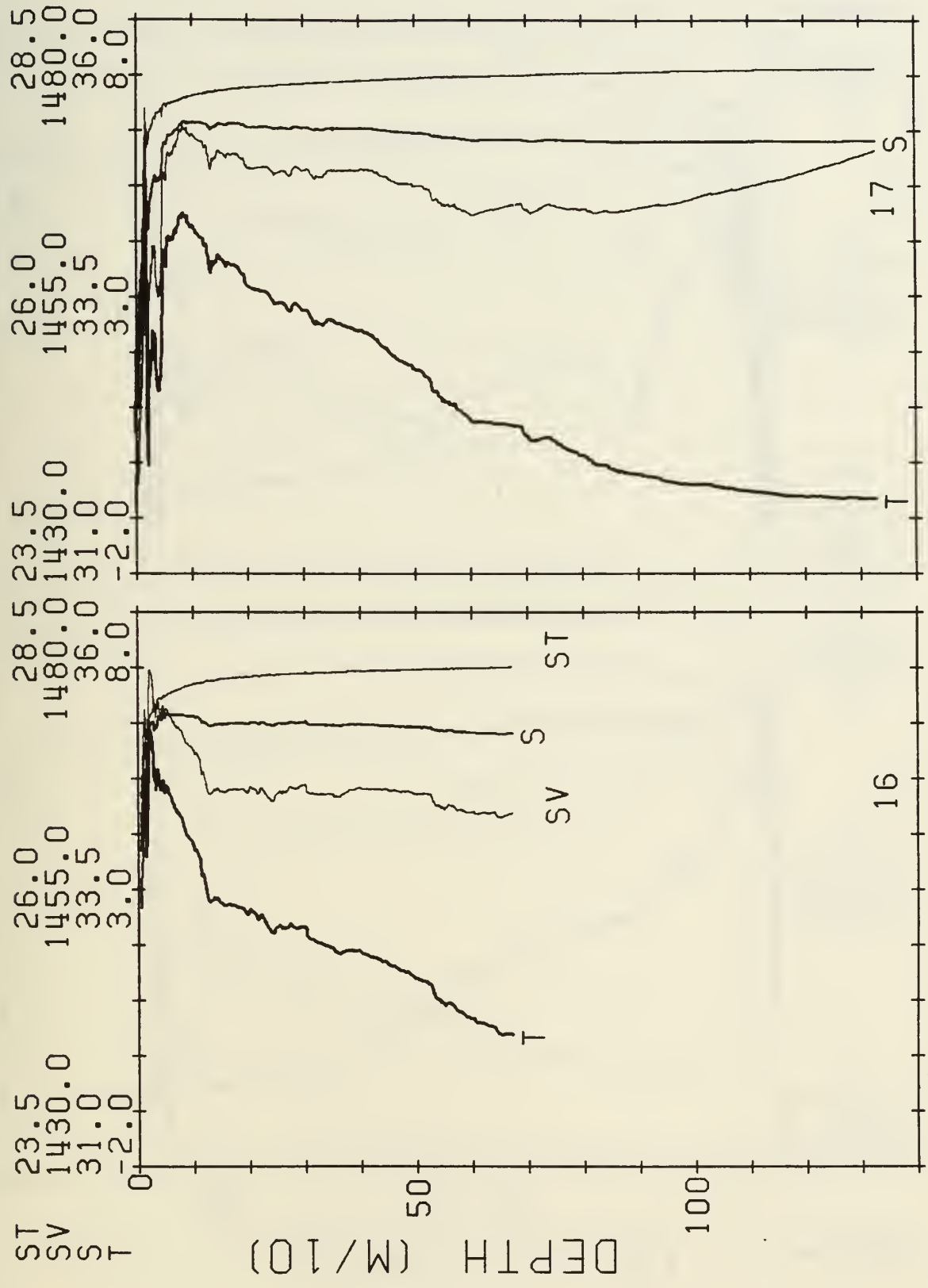
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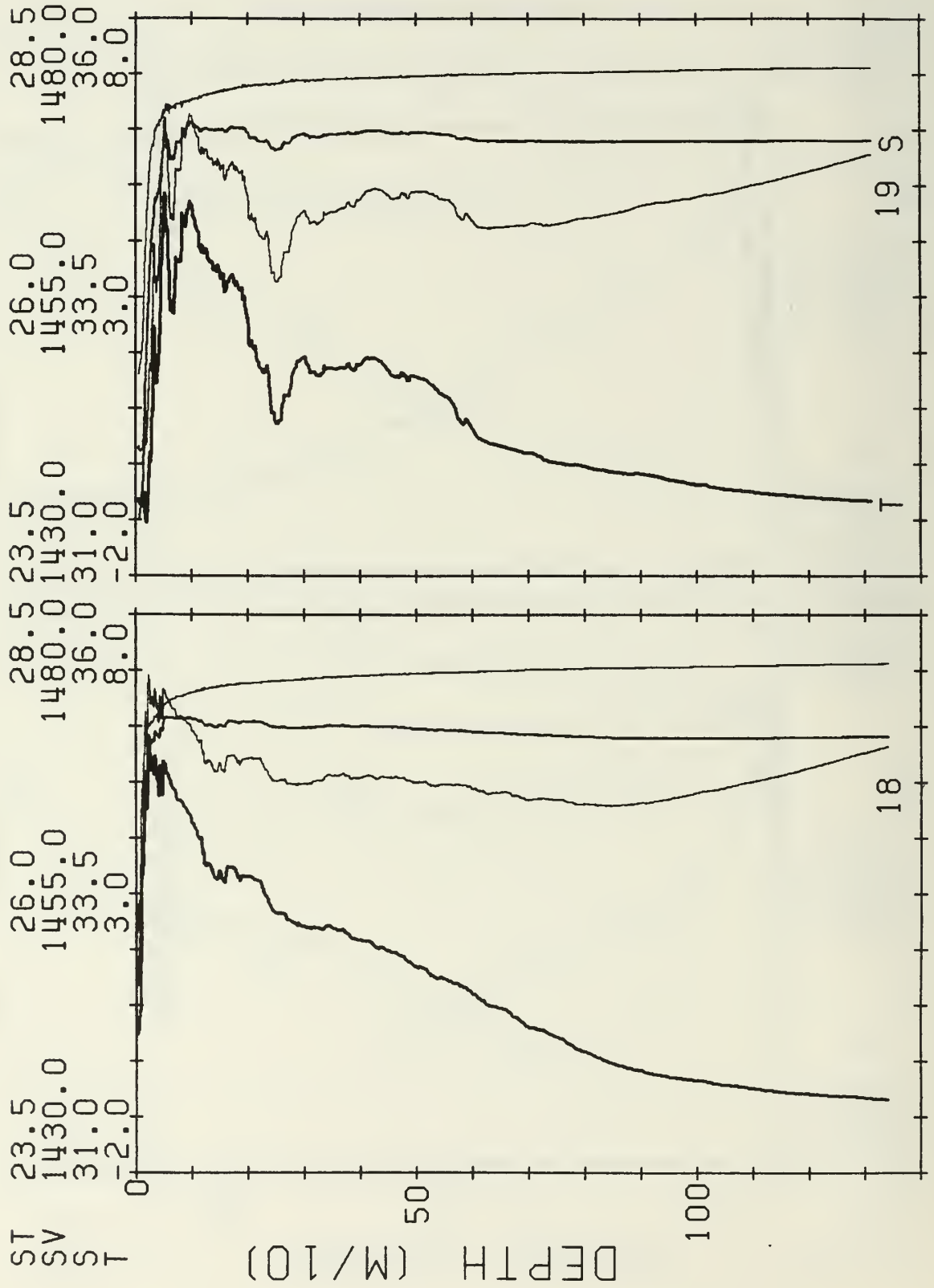
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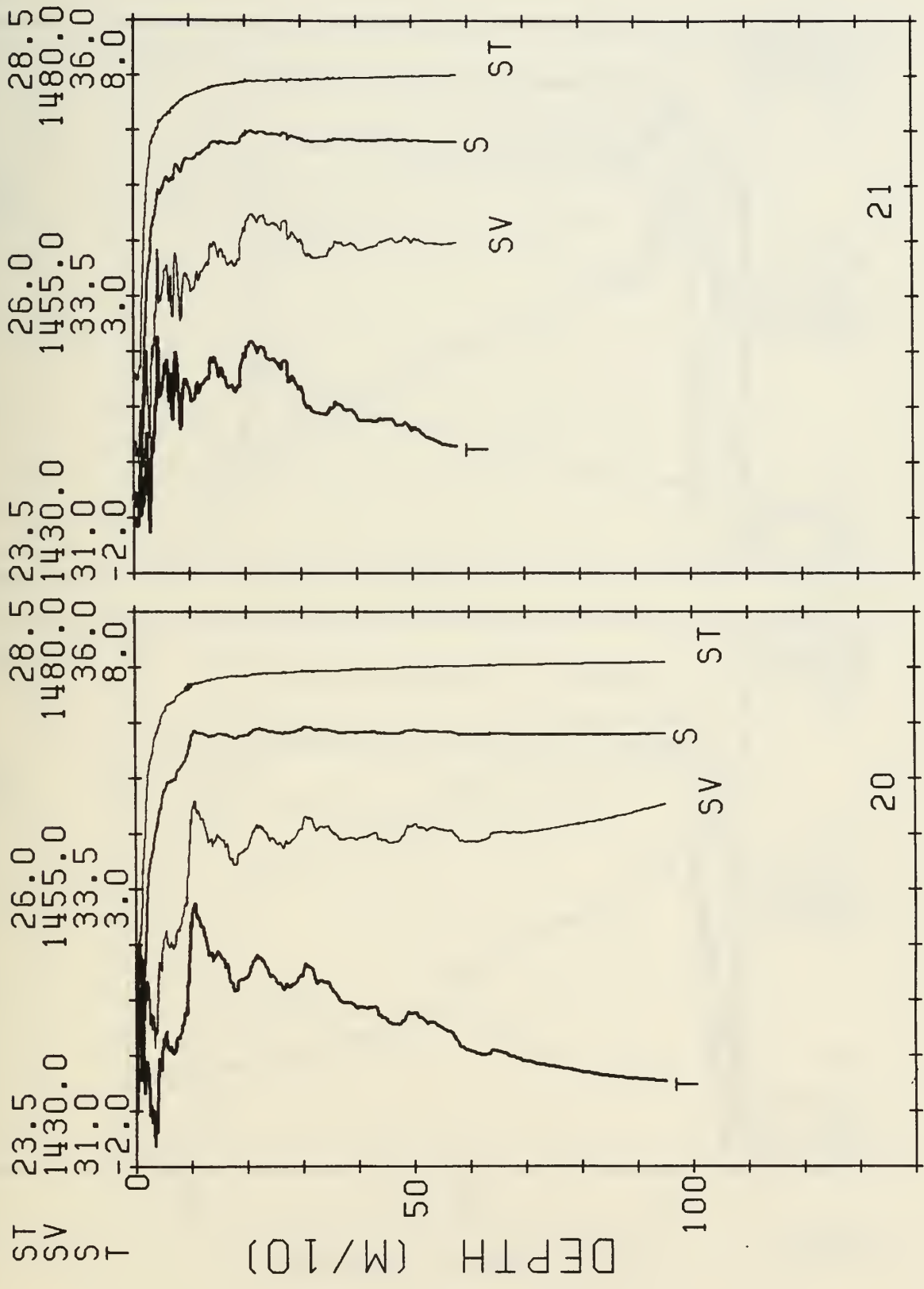
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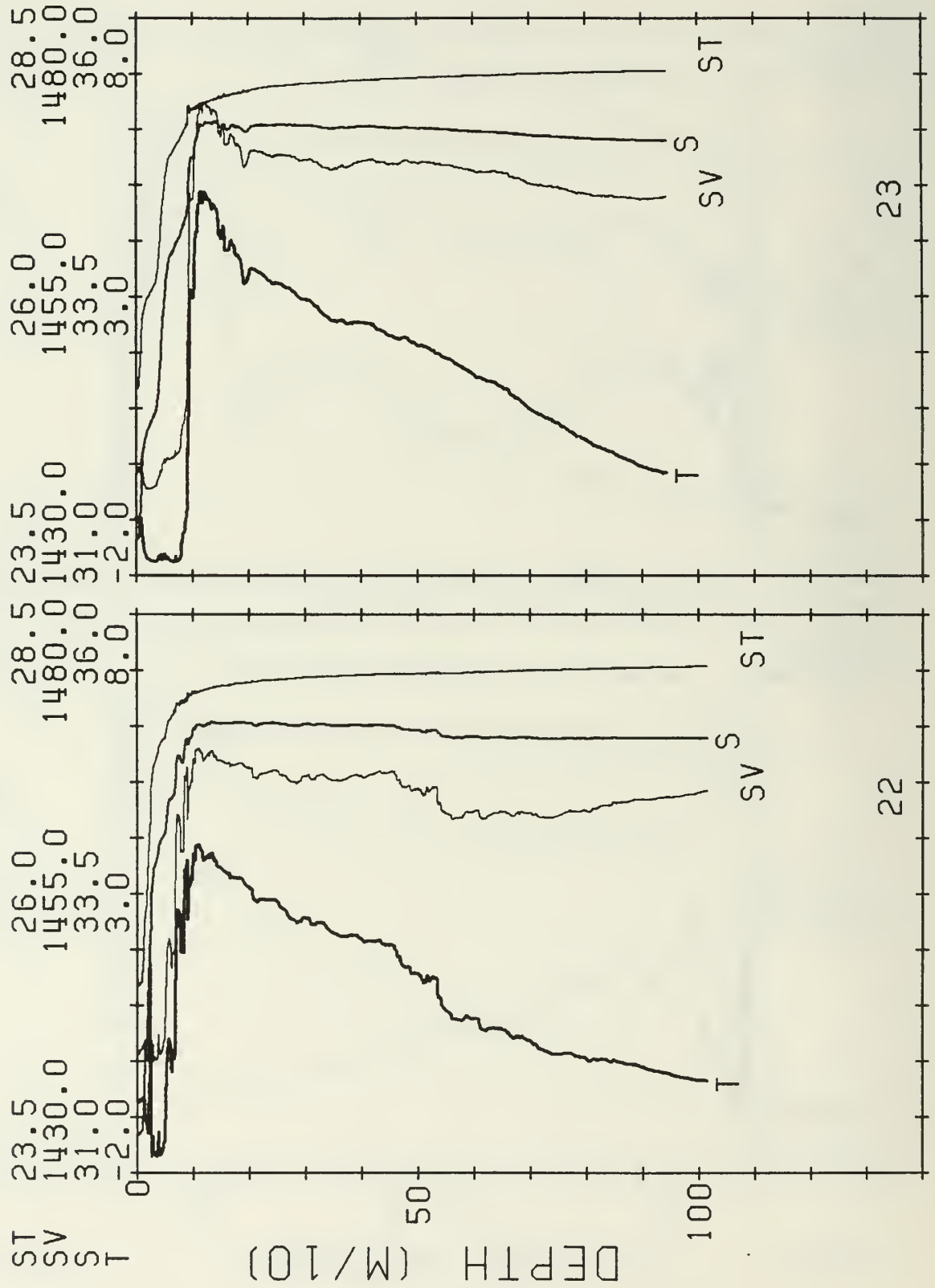
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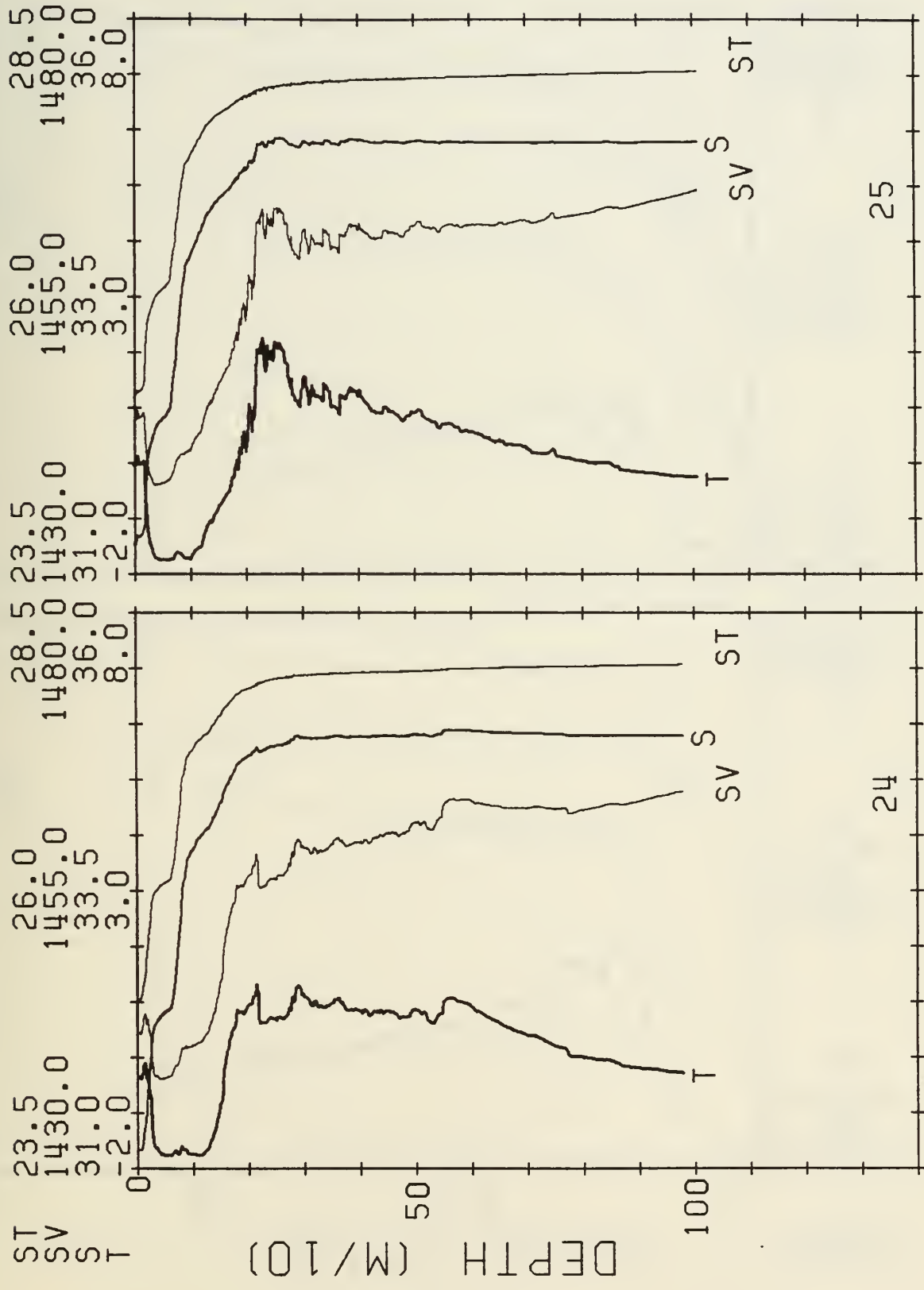
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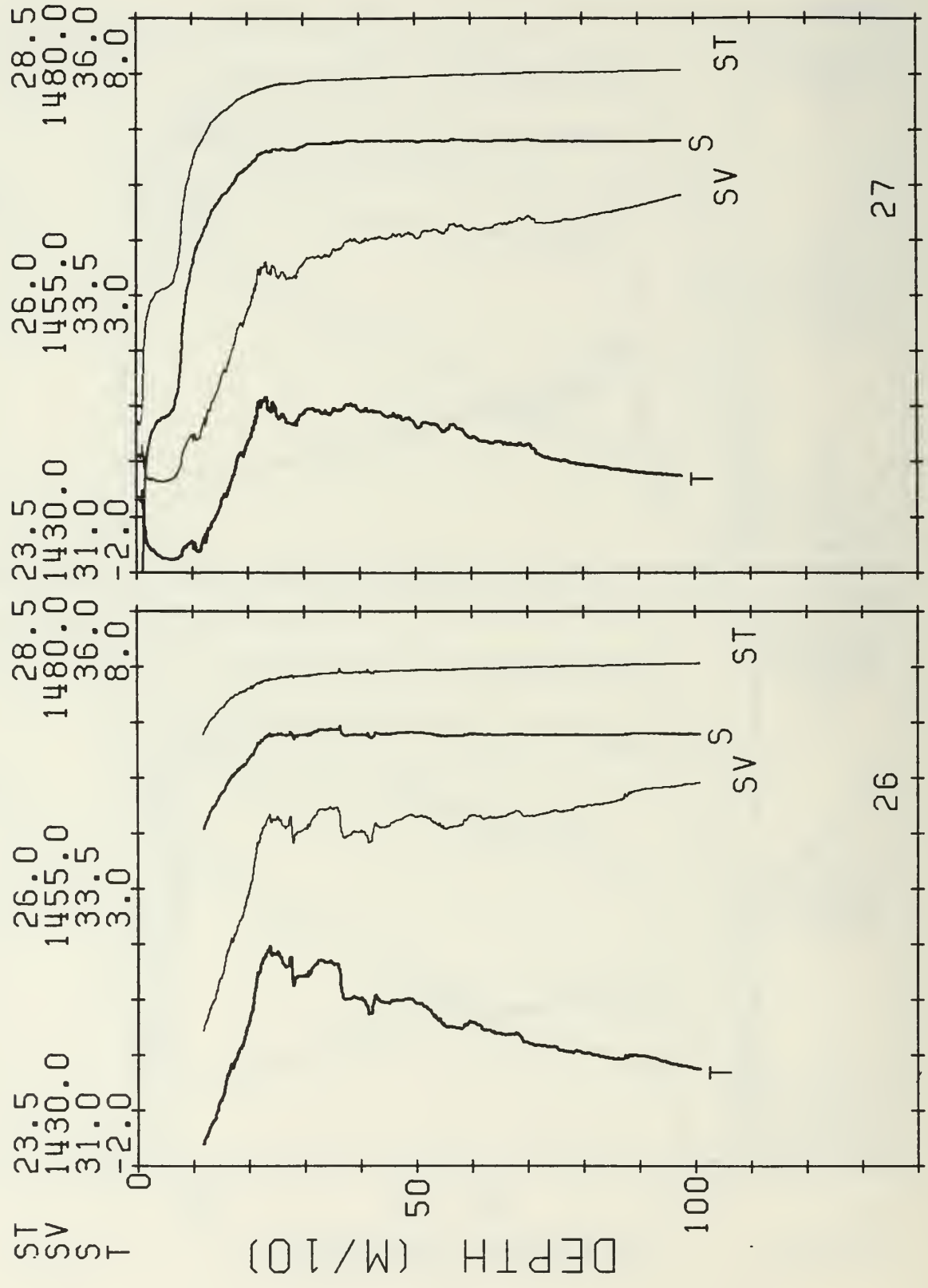
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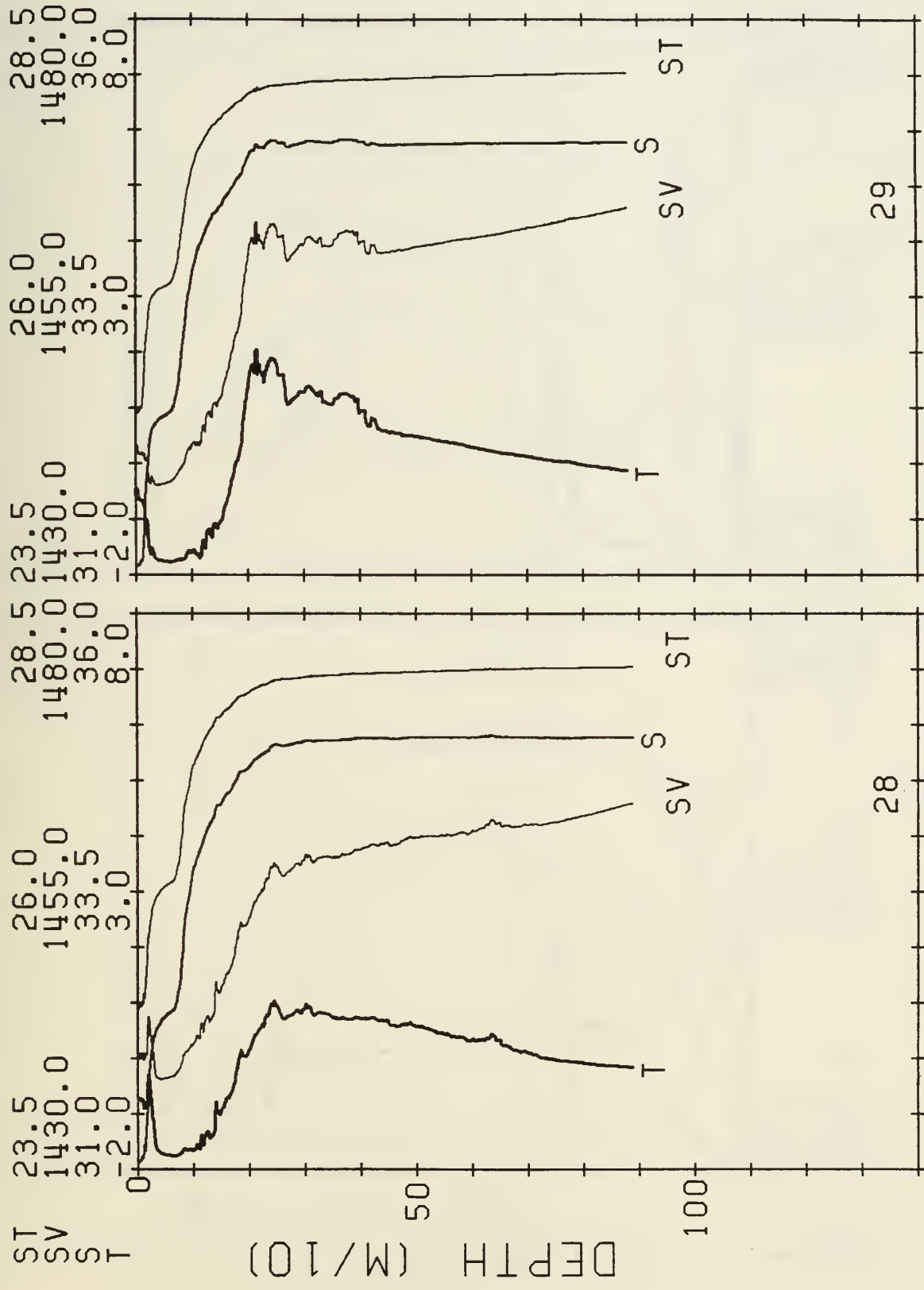
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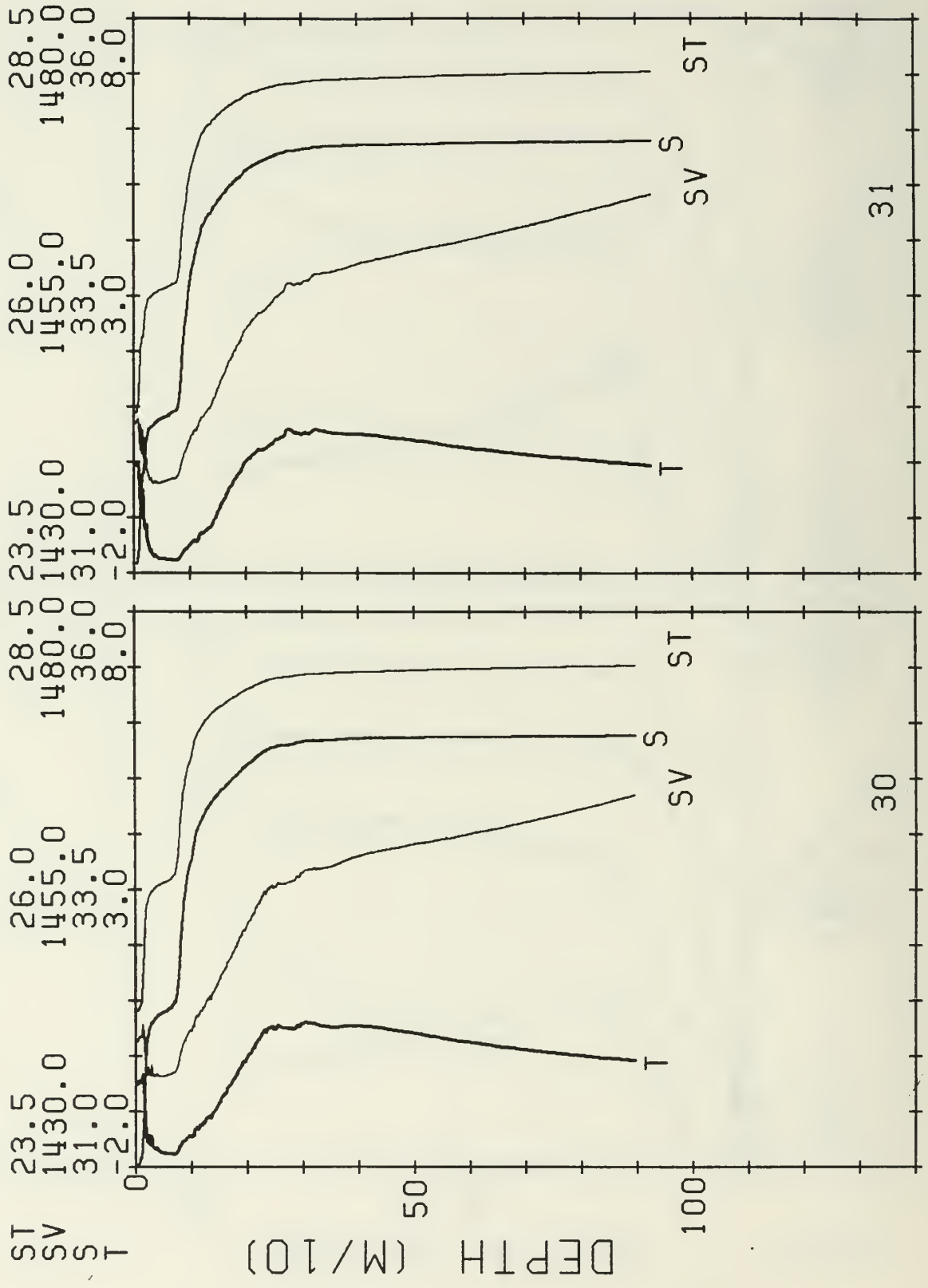
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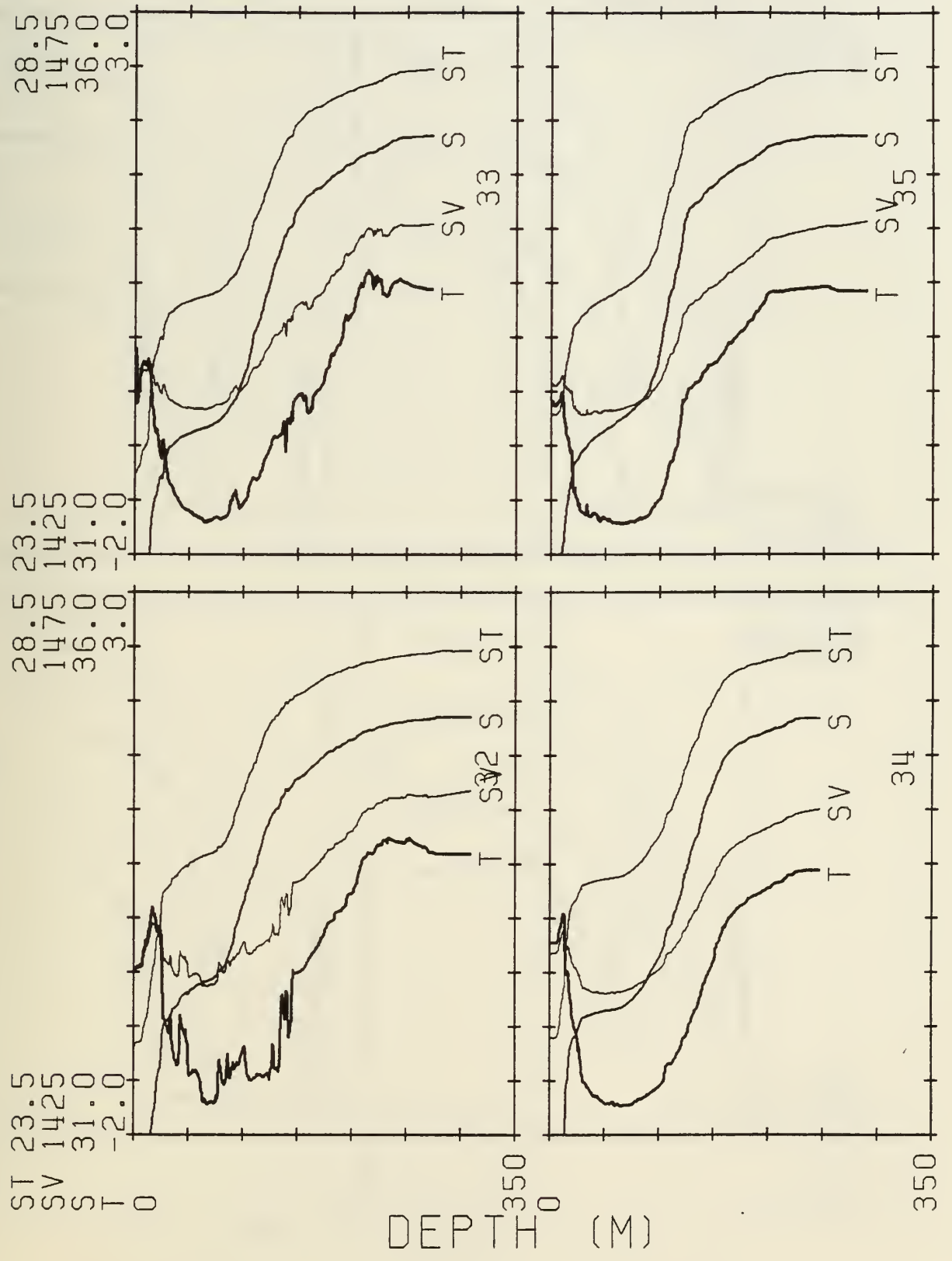
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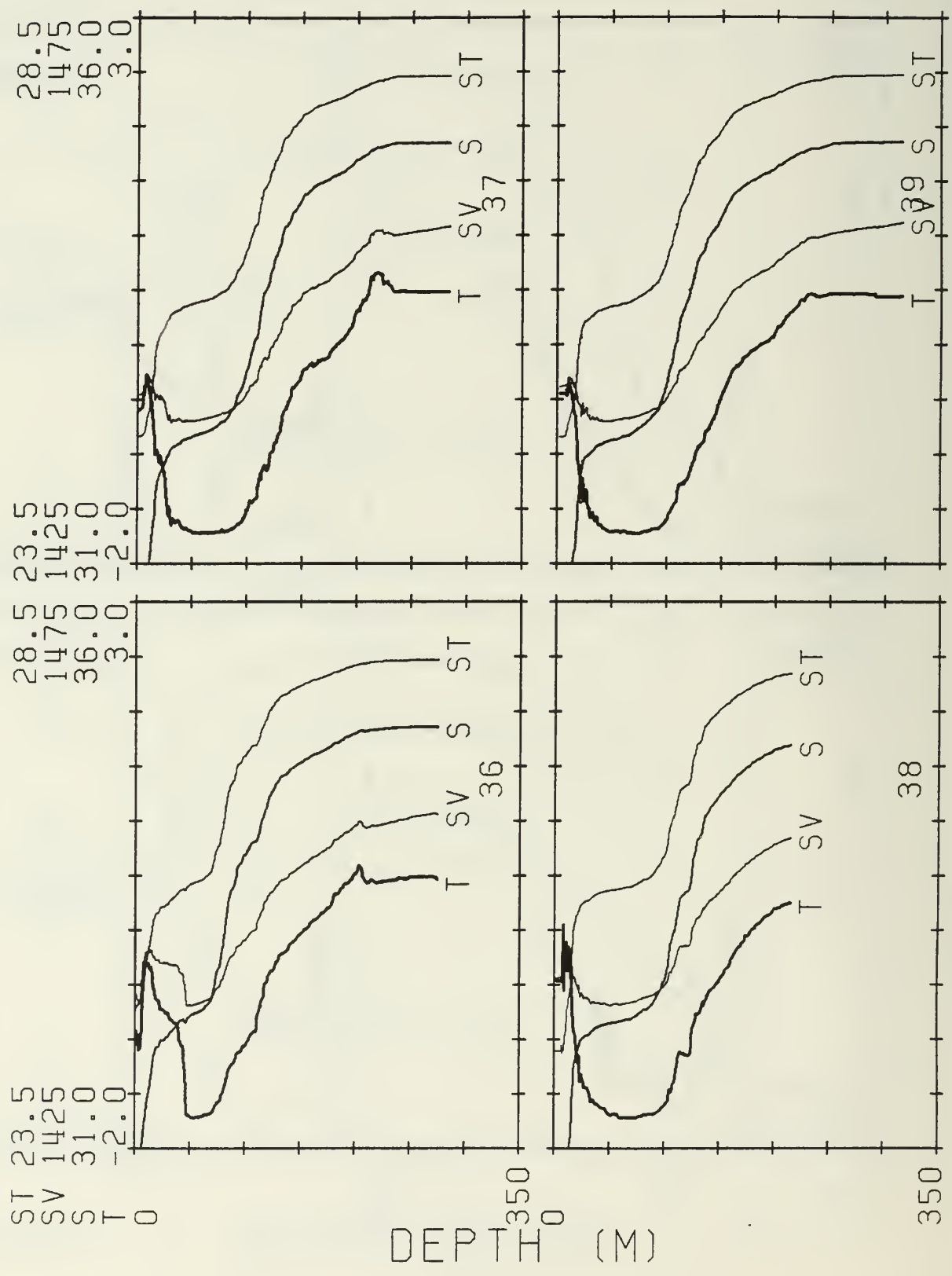
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MIZLANT84 C.T.D. STATIONS



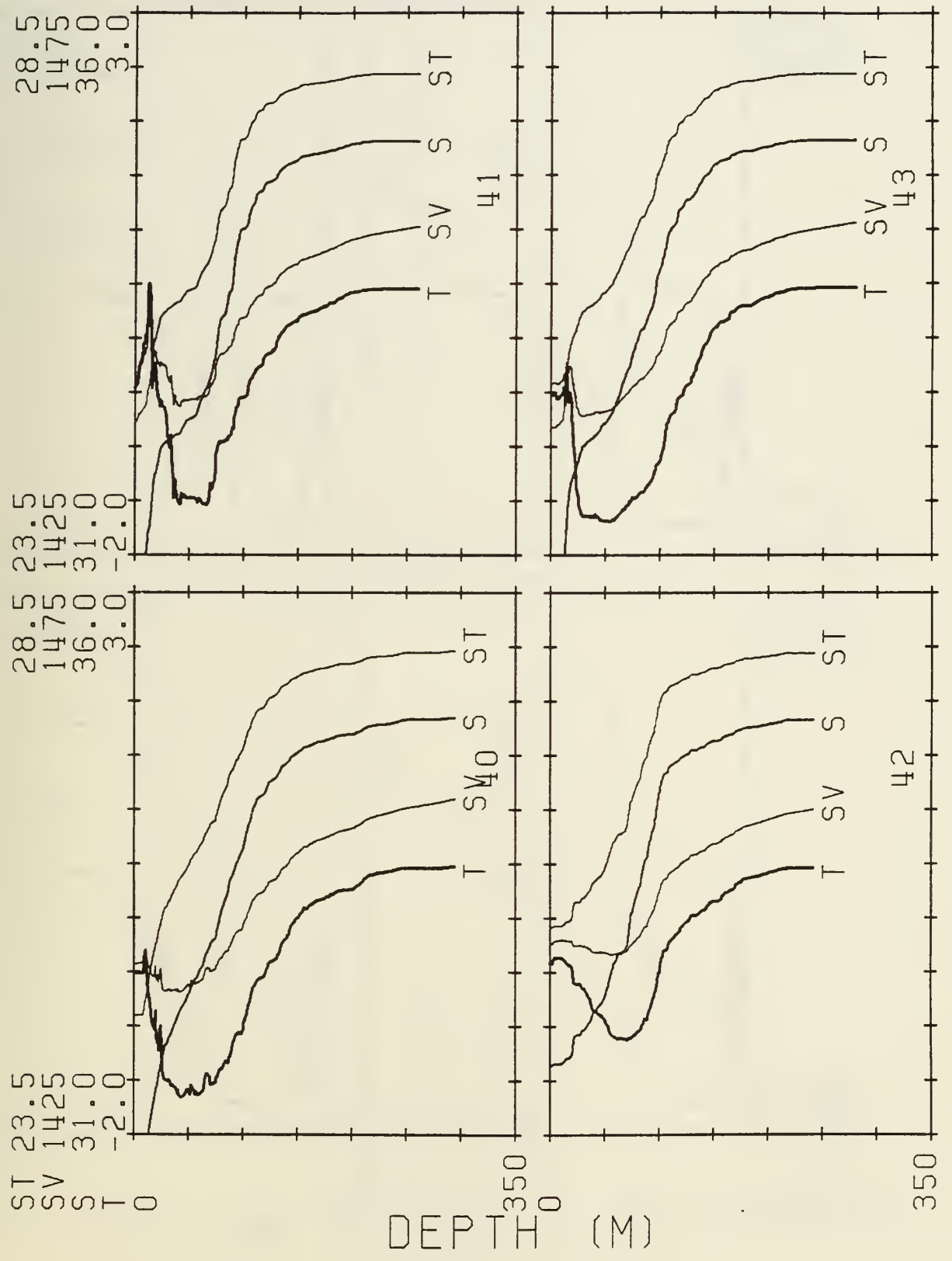
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MI ZLANT84 C.T.D. STATIONS



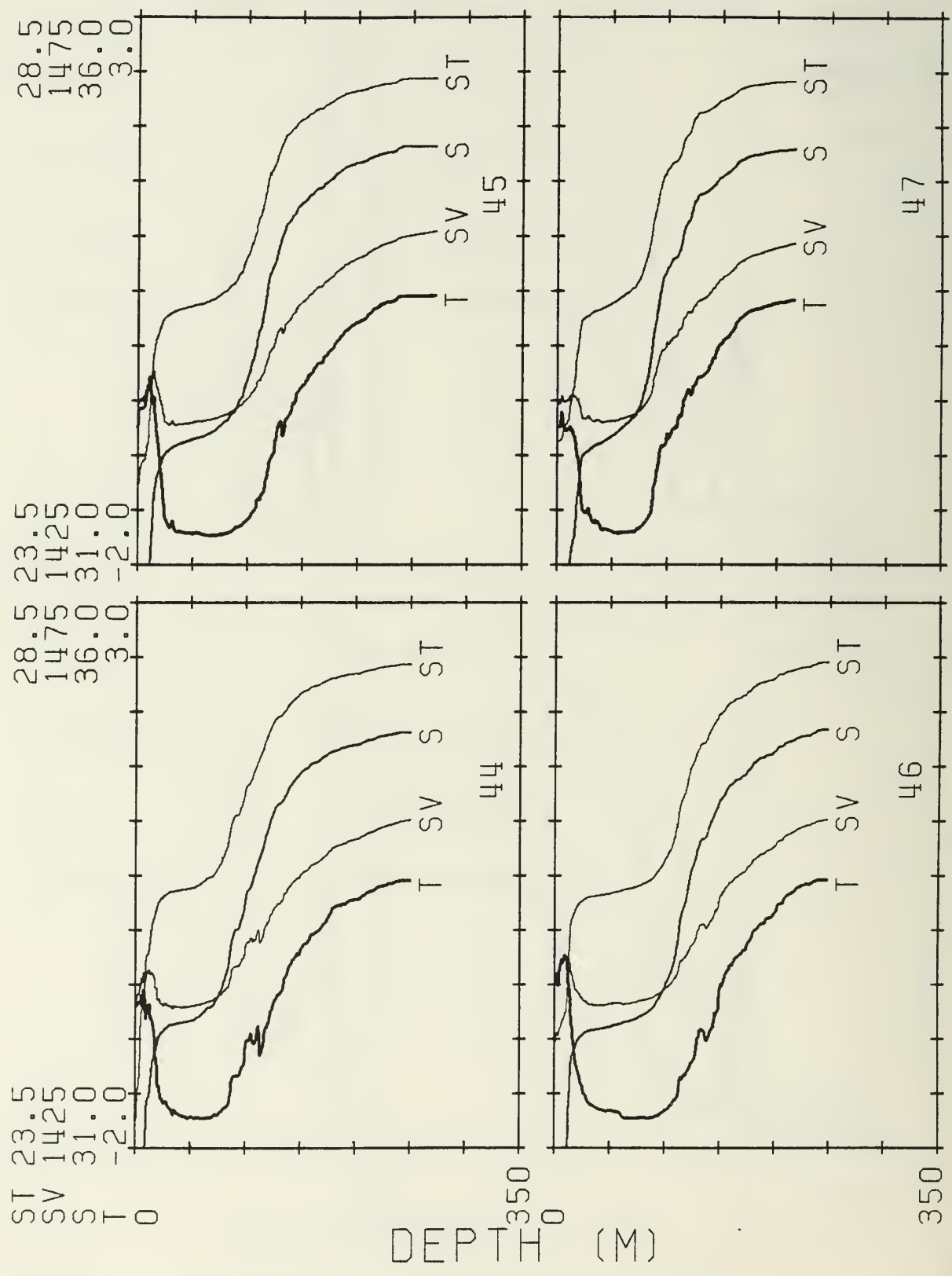
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MIZLANT84 C.T.D. STATIONS



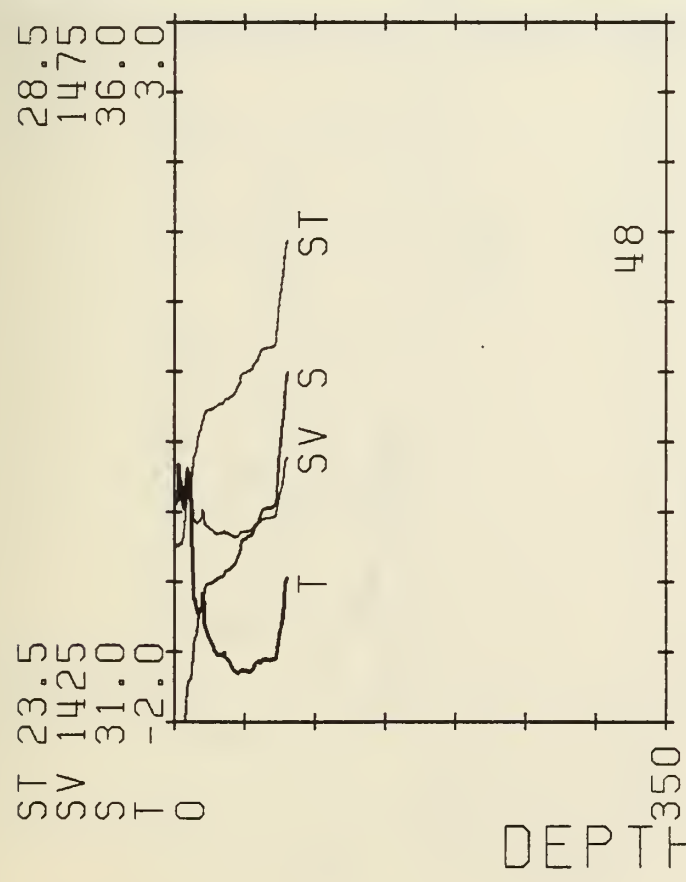
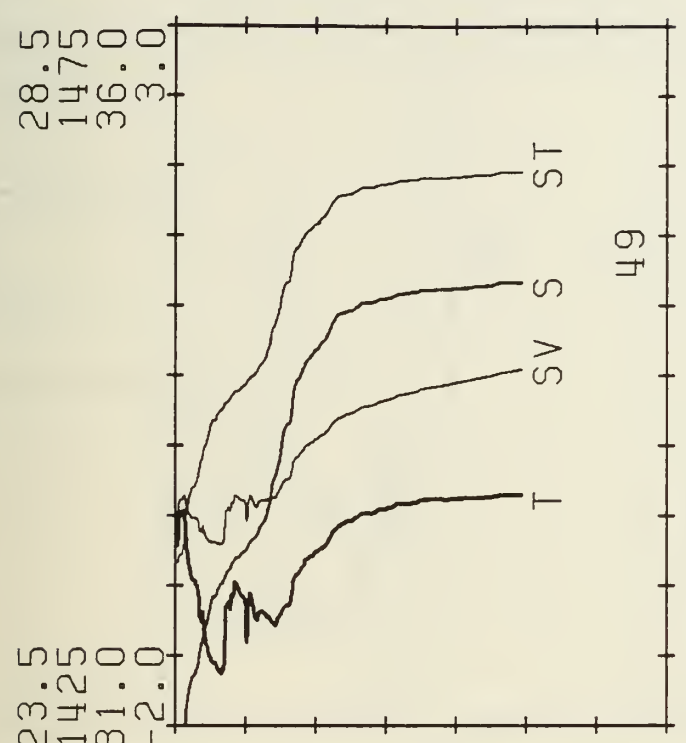
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M/SEC
P.P.T.
DEG C

MIZLANT84 C.T.D. STATIONS



MG/CC
M/SEC
P.P.T.
DEG C

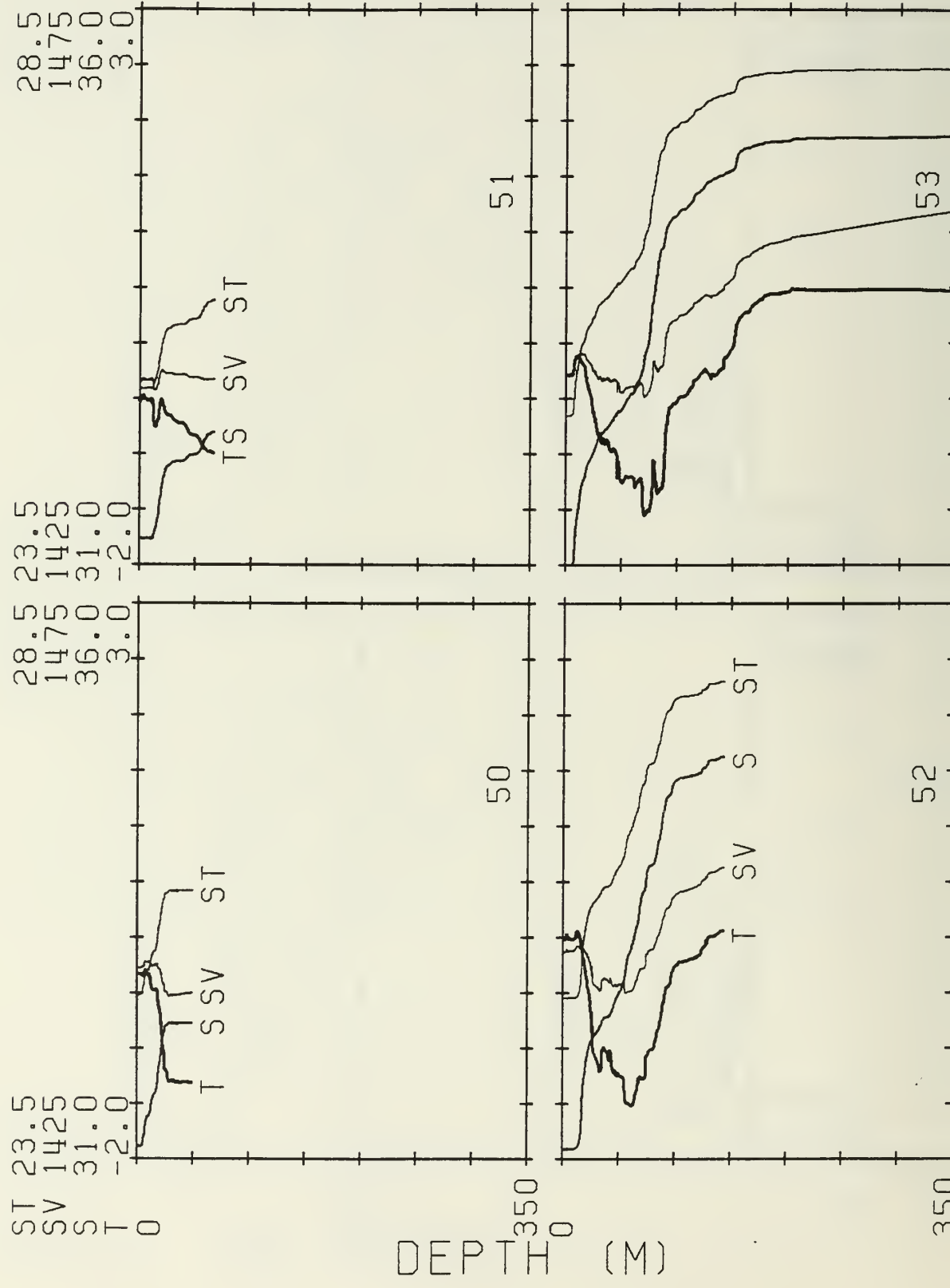
MIZLANT84 C.T.D. STATIONS



DEPTH (M)

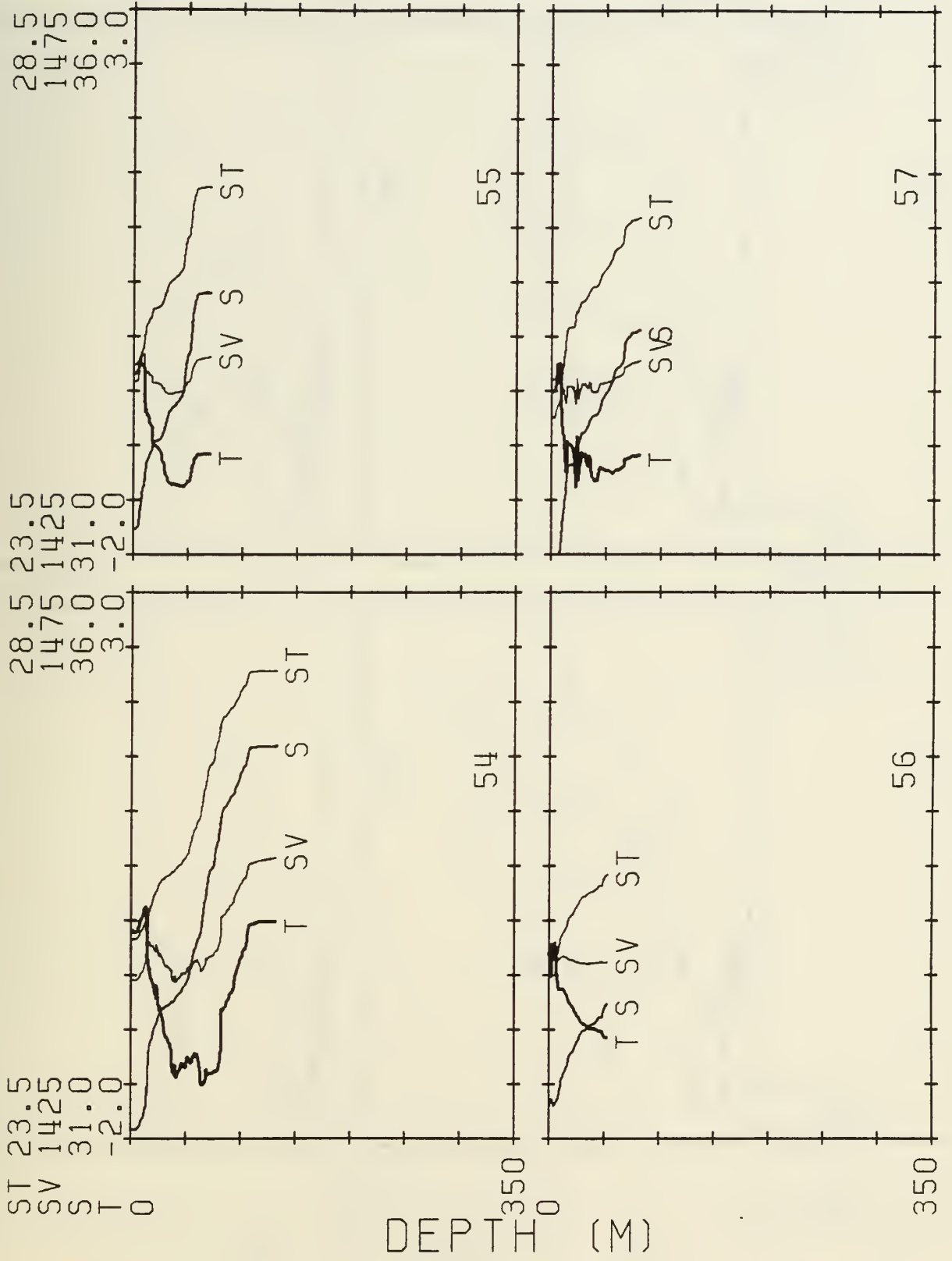
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MIZLANT84 C.T.D. STATIONS



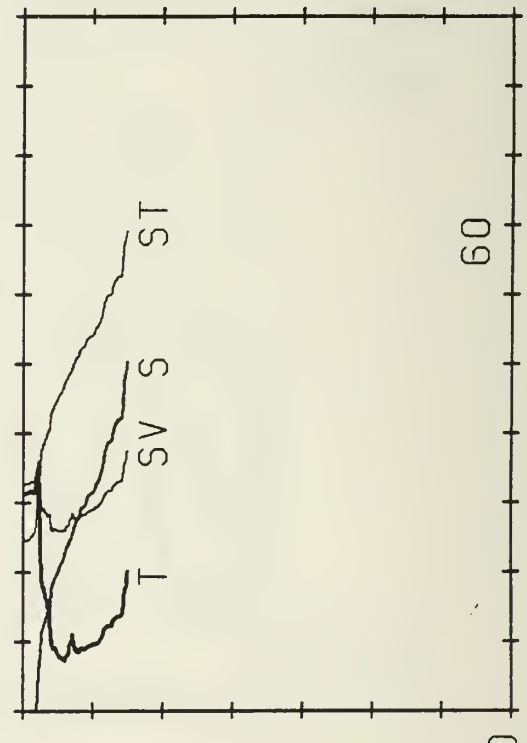
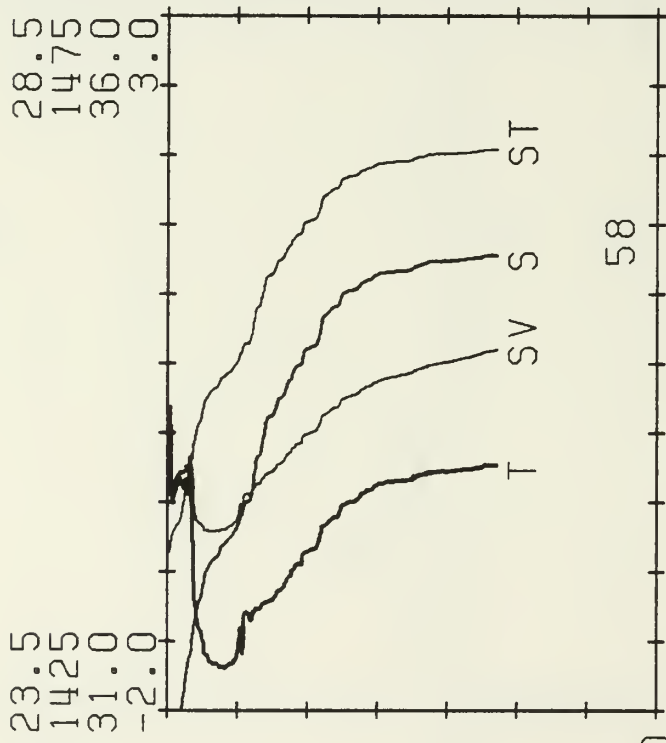
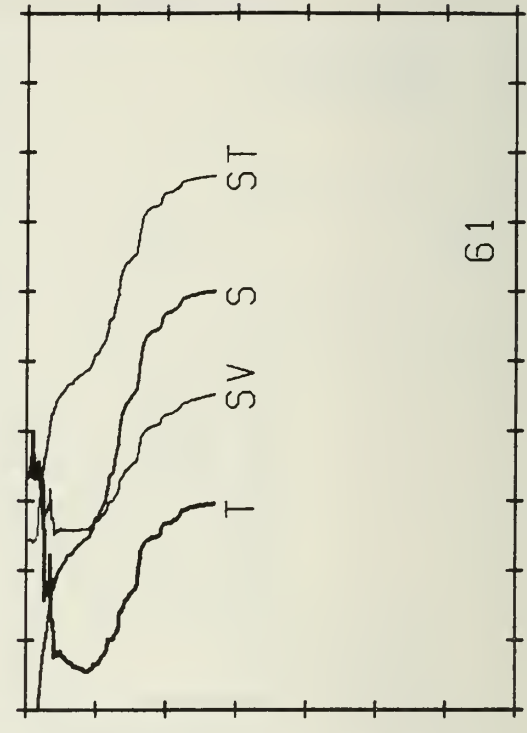
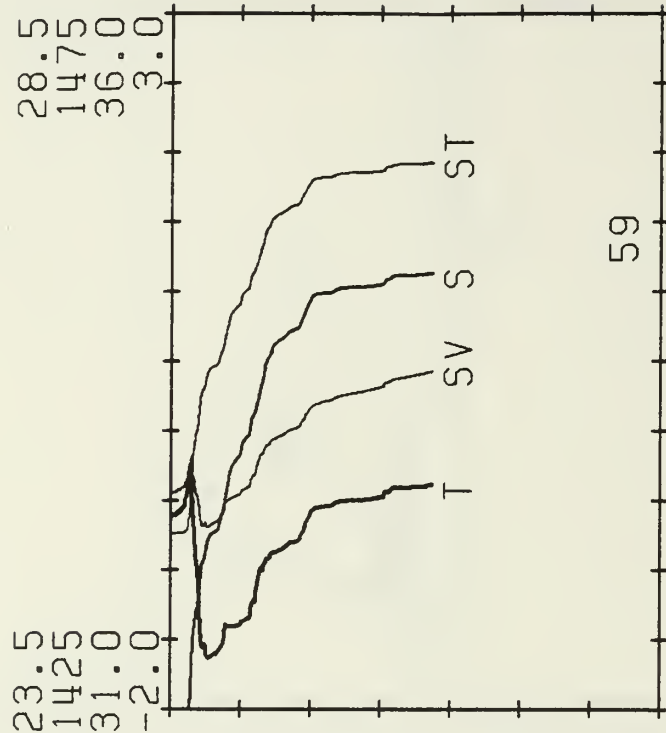
MG/CC
M/SEC
P.P.T.
DEG C

MIZLANT84 C.T.D. STATIONS



MG/CC
M/SEC
P.P.T.
DEG C

MIZLANT84 C.T.D. STATIONS

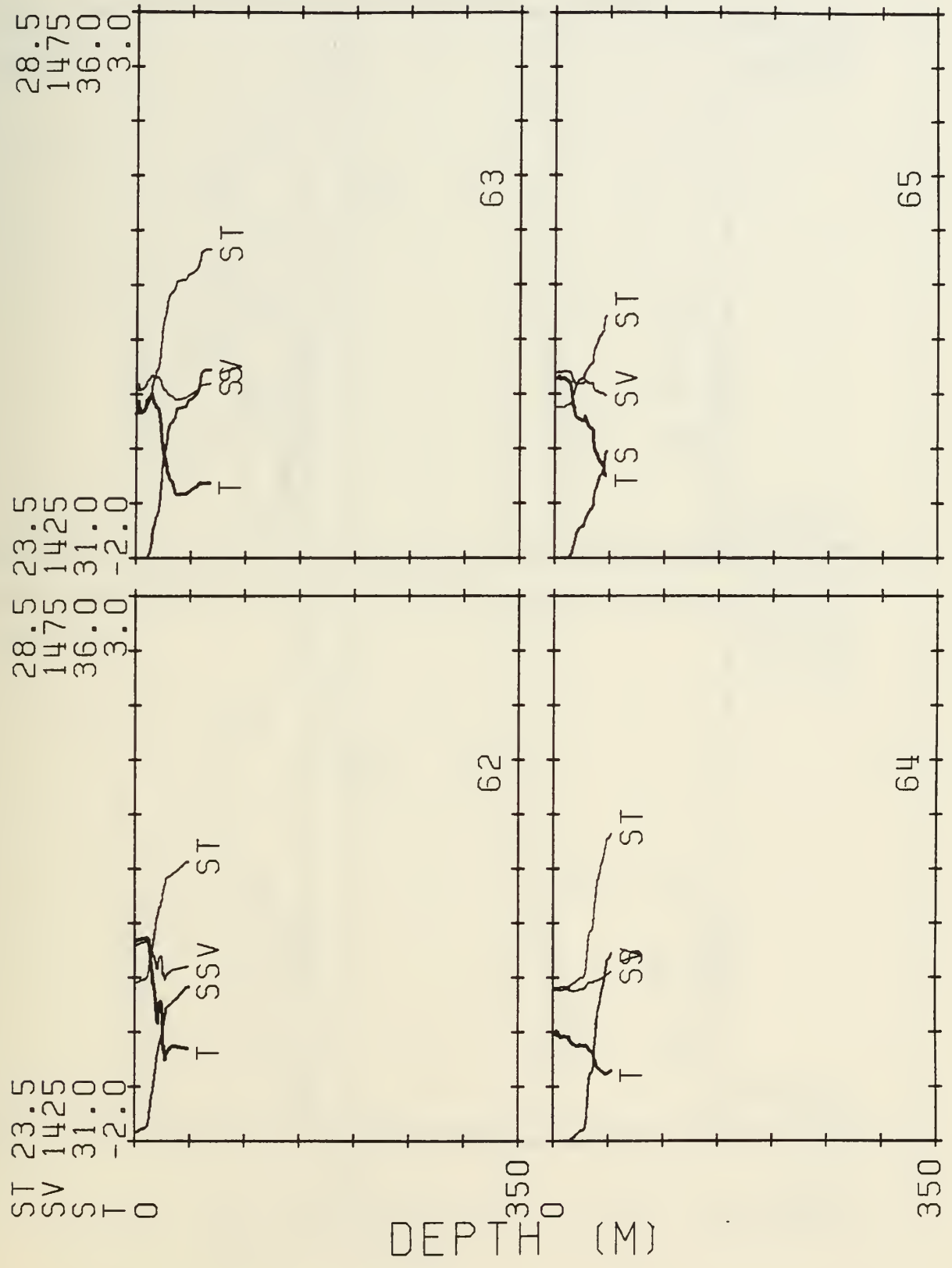


ST 23.5
SV 1425
S 31.0
T -2.0

DEPTH (M)

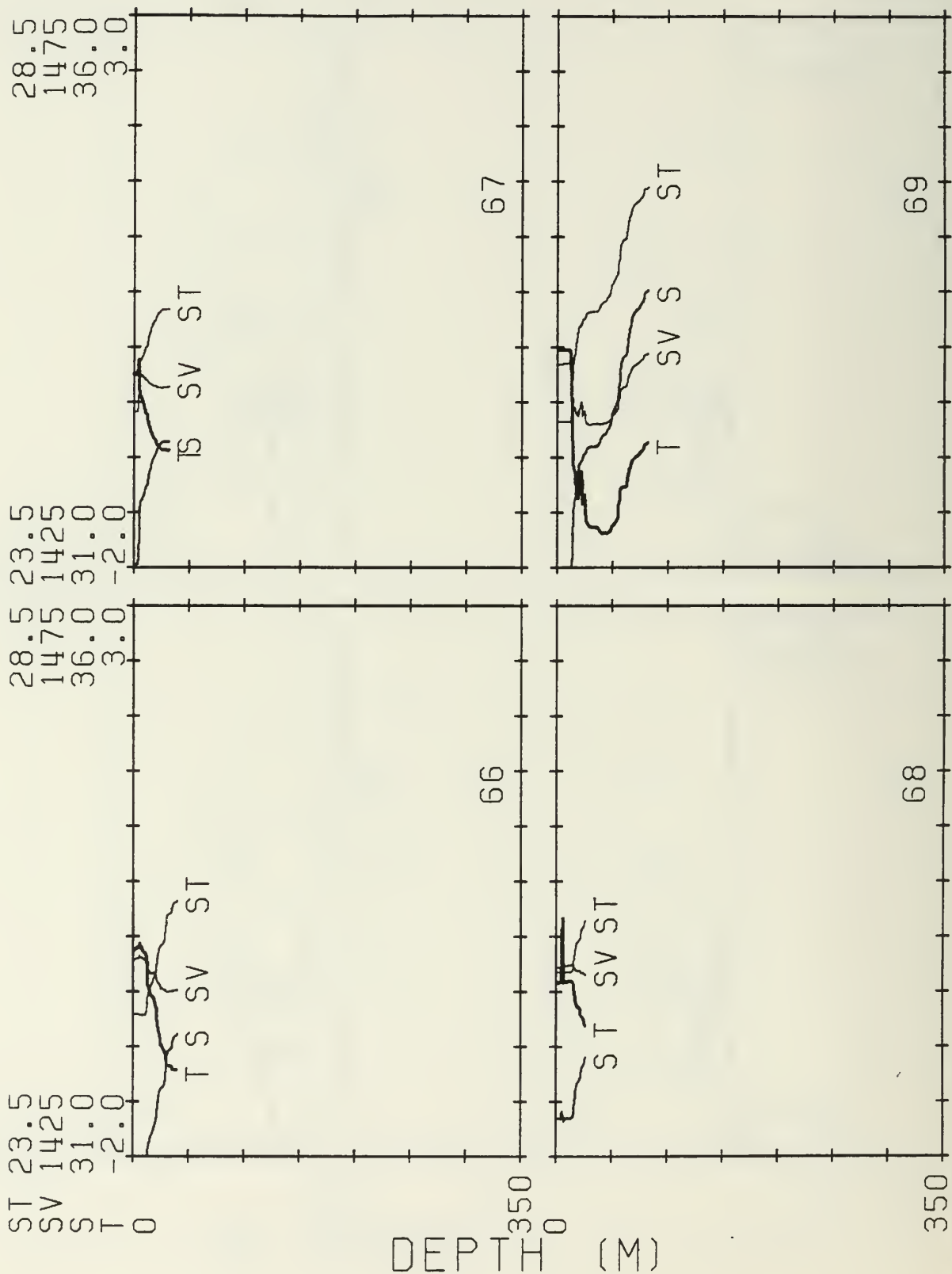
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M/SEC
P.P.T.
DEG C

MIZLANT84 C.T.D. STATIONS



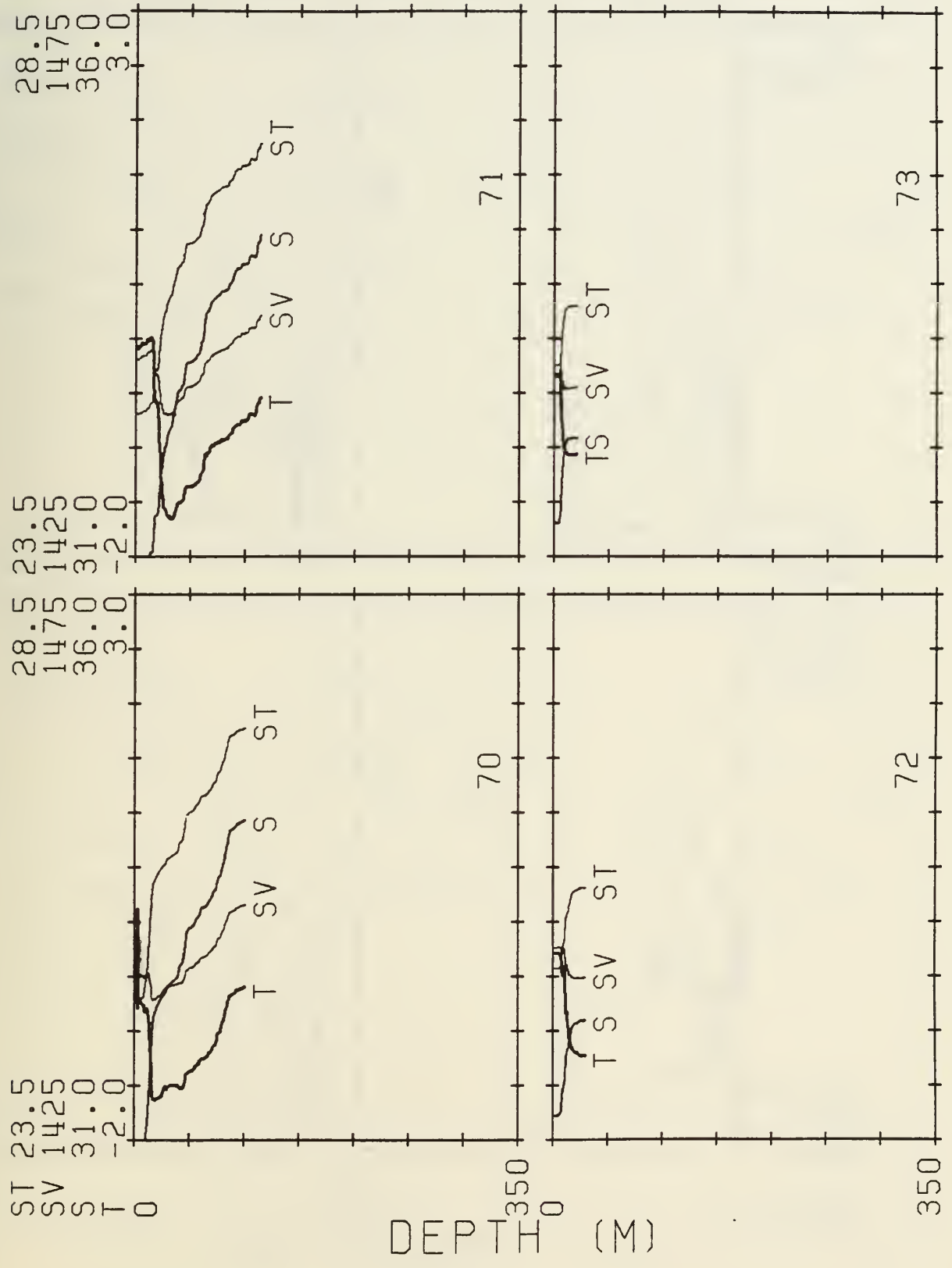
28.5
147.5
36.0
3.0

MIZLANT84 C.T.D. STATIONS



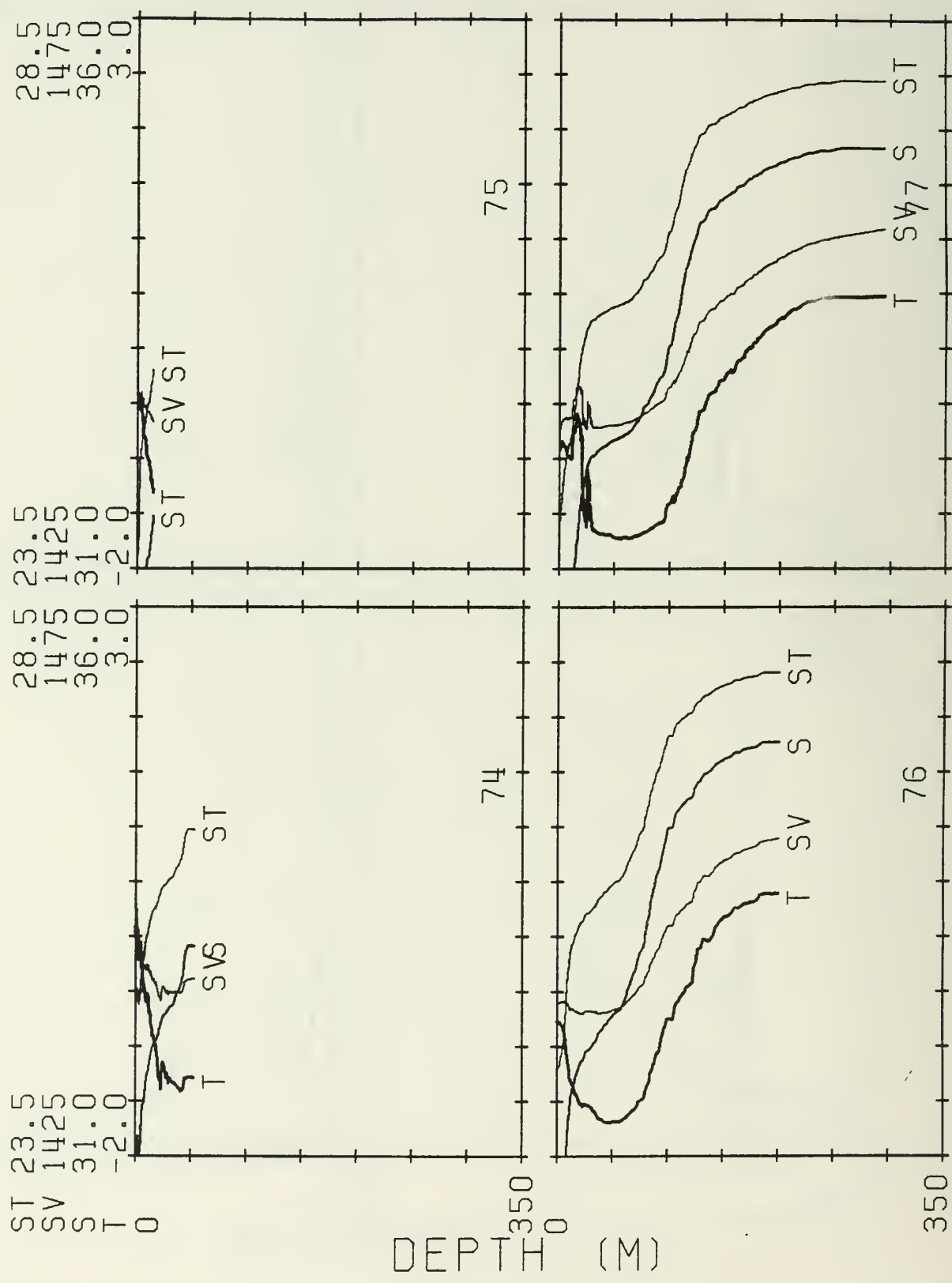
MG/CC
M/SEC
P.P.T.
DEC C

MIZLANT84 C.T.D. STATIONS



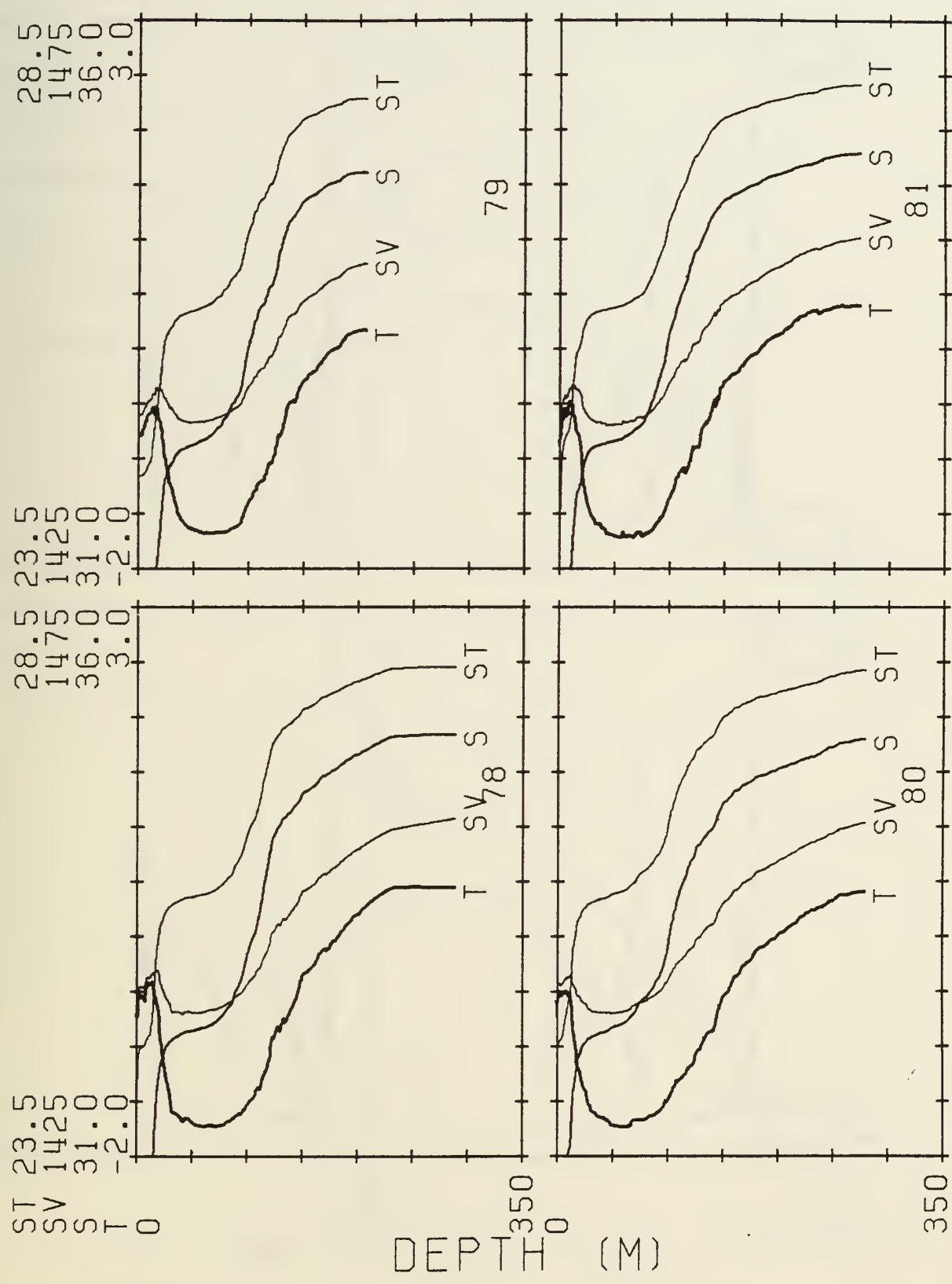
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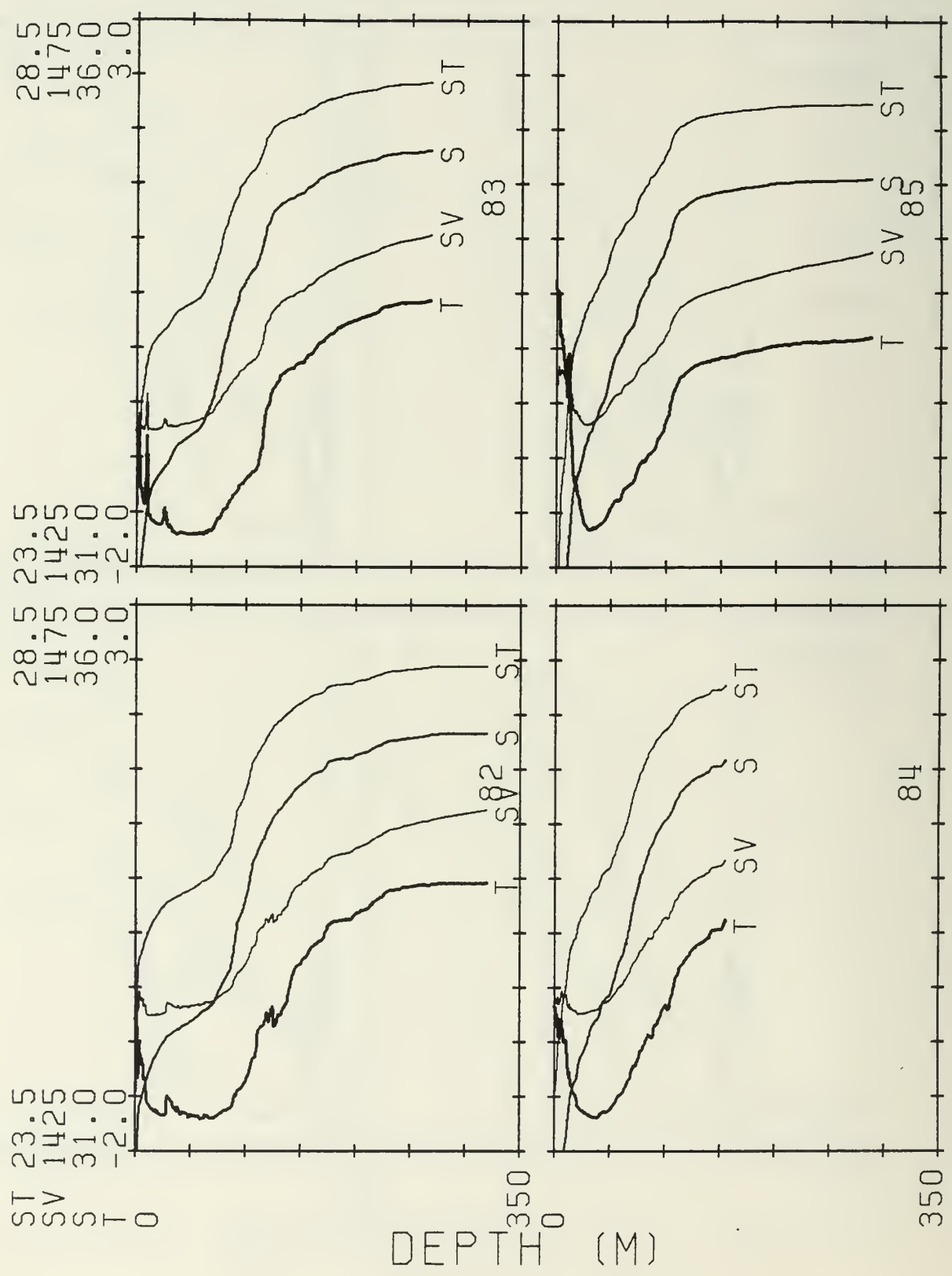
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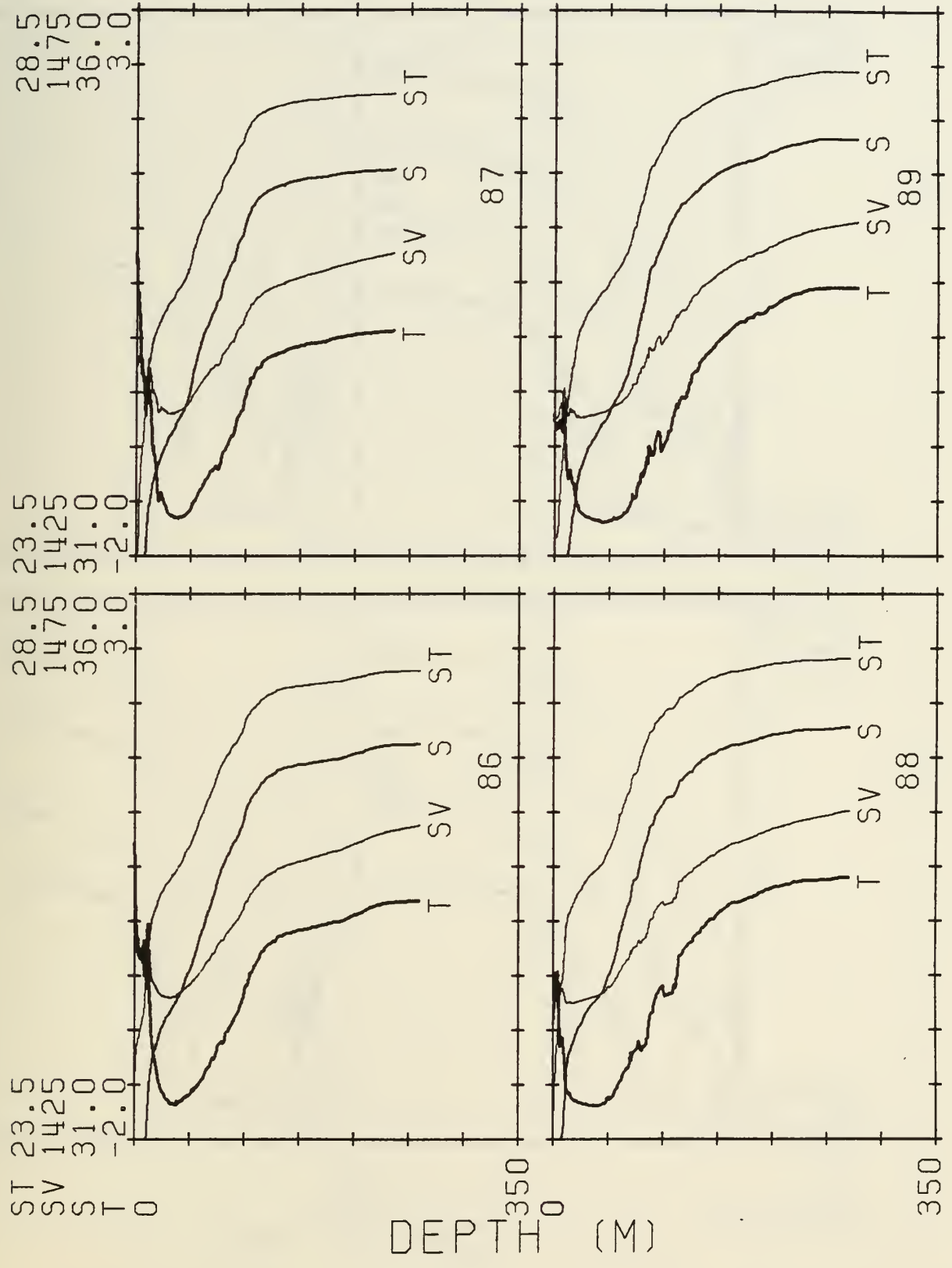
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DEG.C

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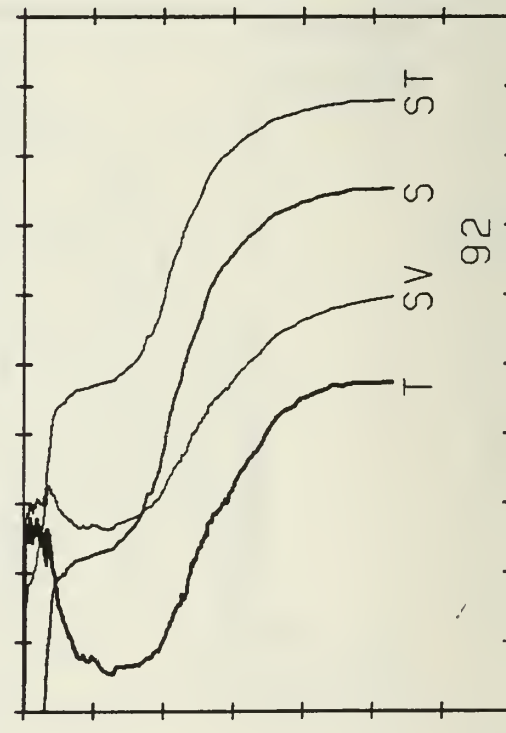
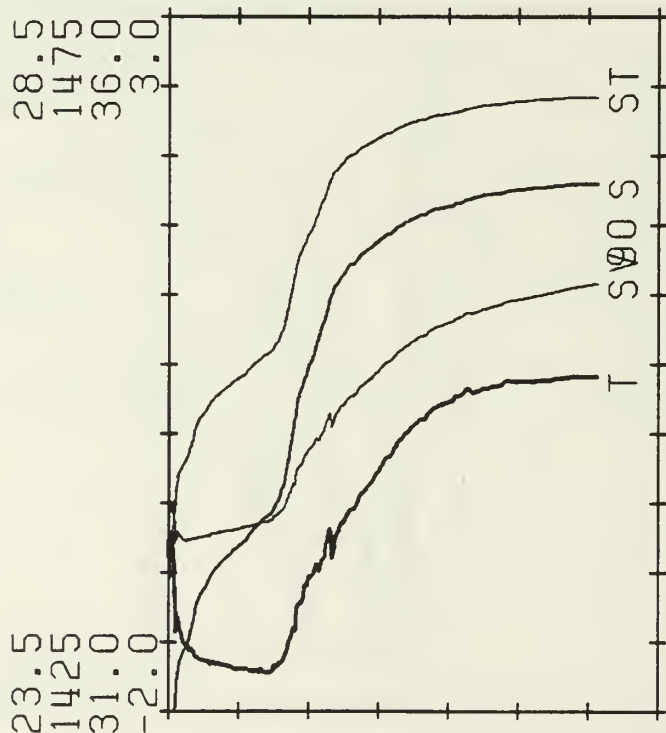
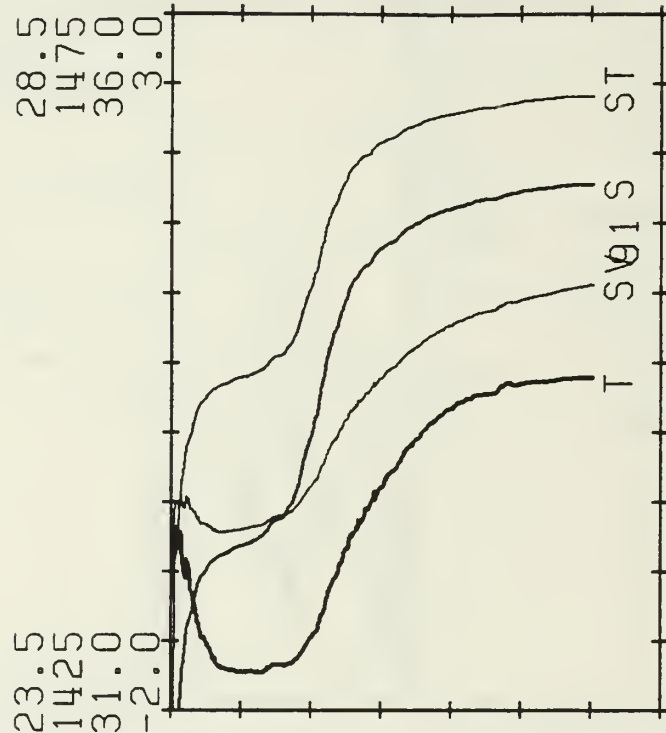
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M/SEC
P.P.T.
DEG C

MIZLANT84 C.T.D. STATIONS



MG/CC
M/SEC
P.P.T.
DEG C

MIZLANT84 C.T.D. STATIONS



ST 23.5
SV 1425
S 31.0
T -2.0

DEPTH (M)

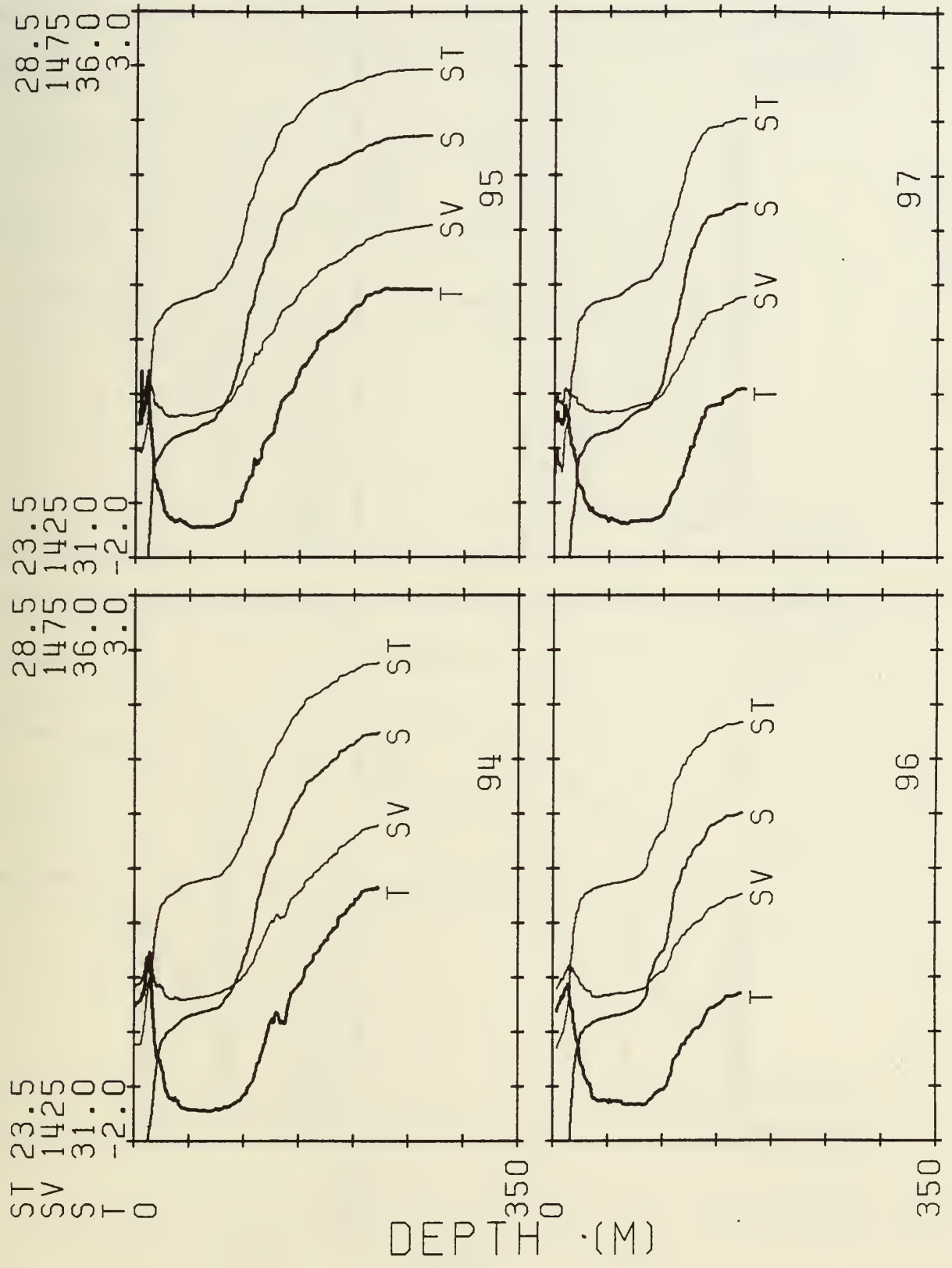
93

92

350

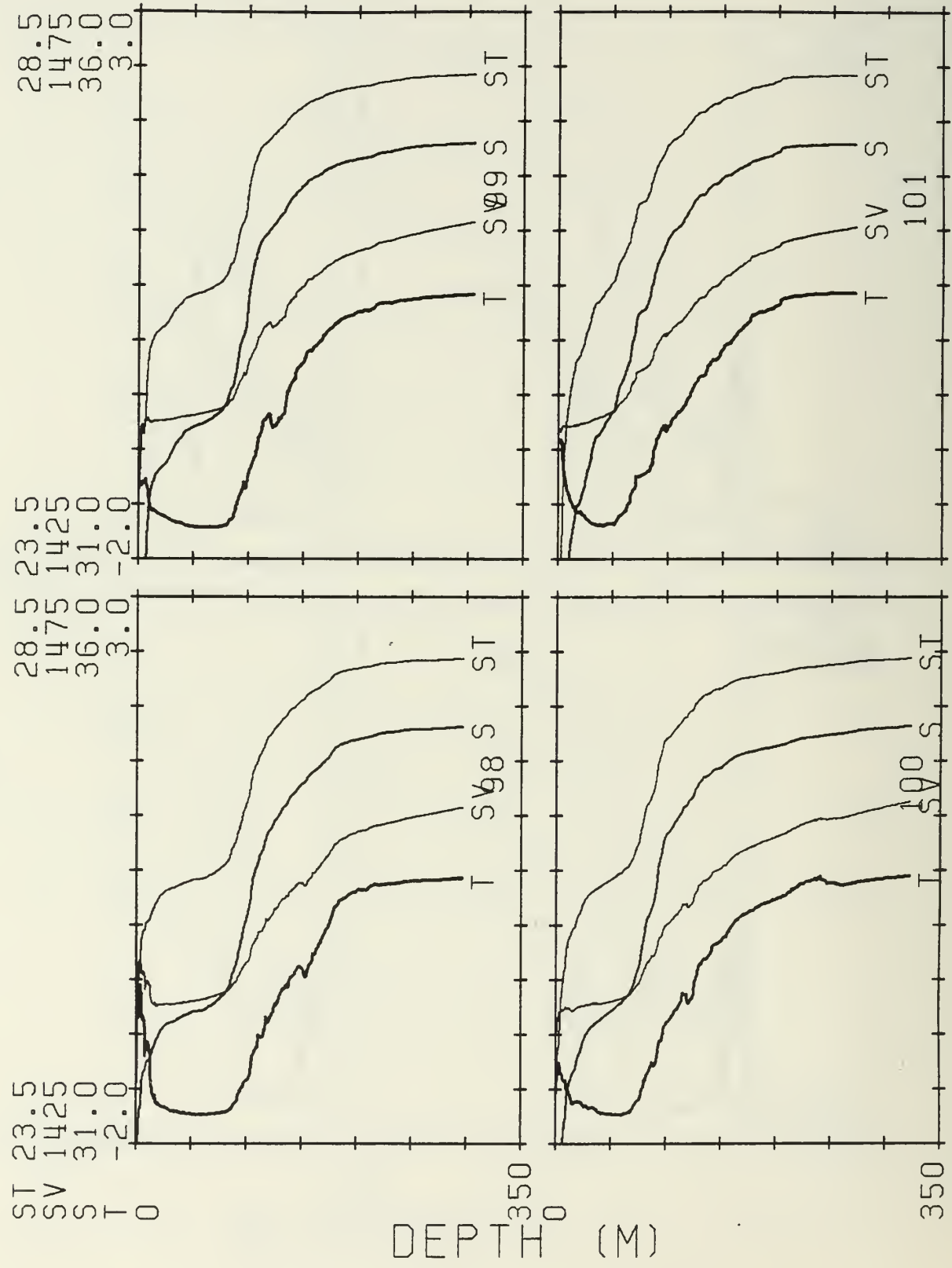
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DEG C

MIZLANT84 C.T.D. STATIONS



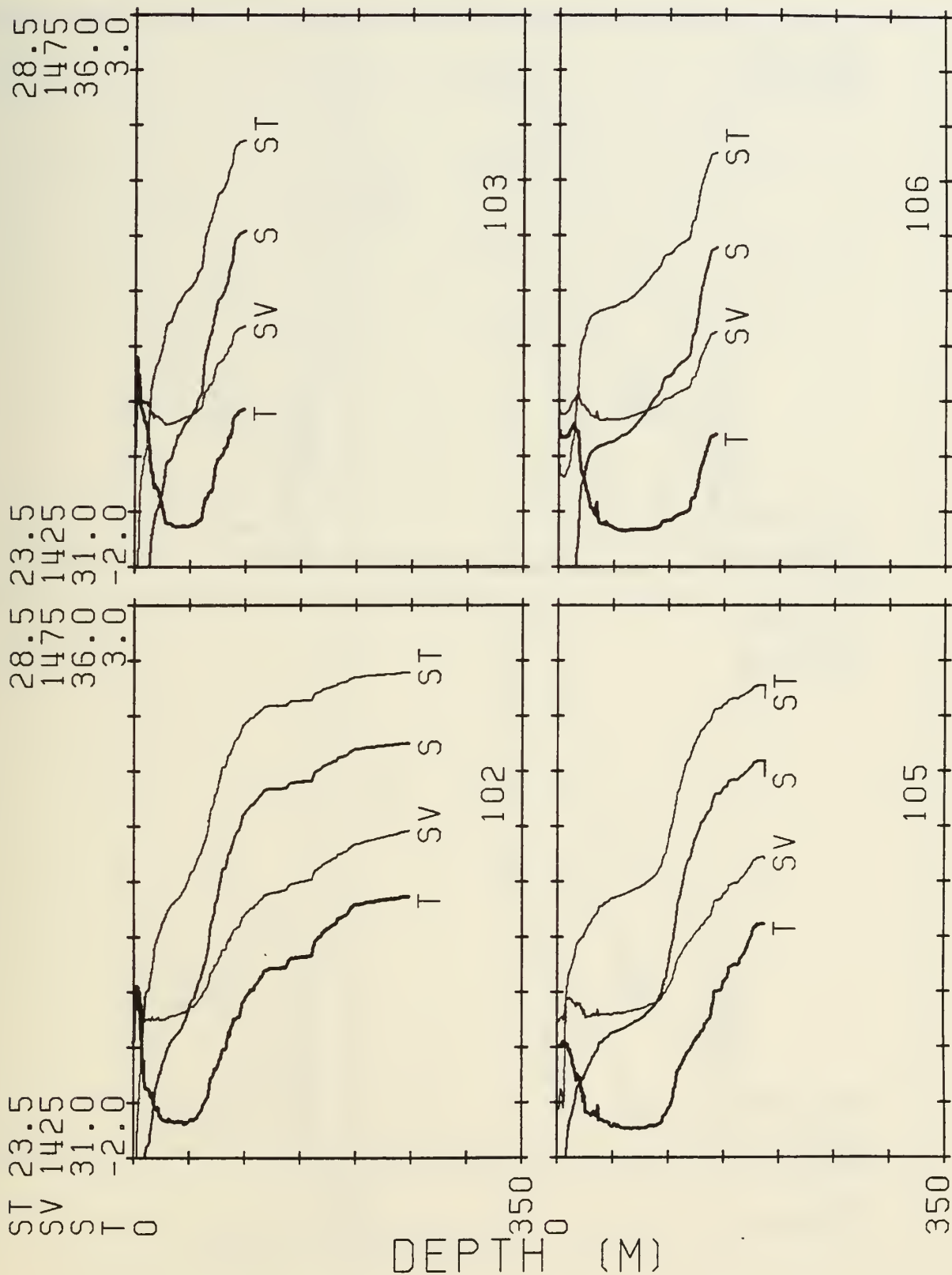
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DEG C

MIZLANT84 C.T.D. STATIONS



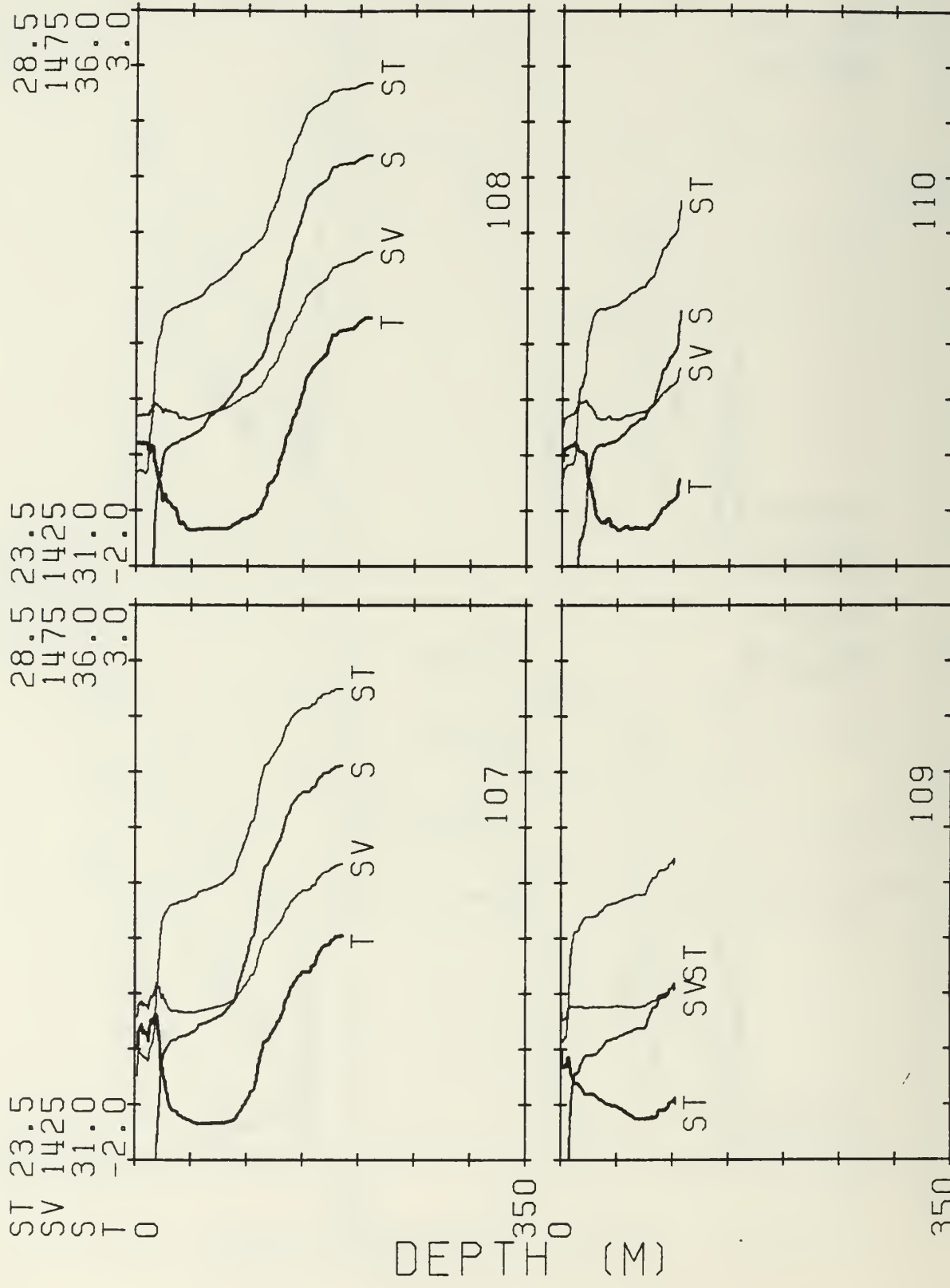
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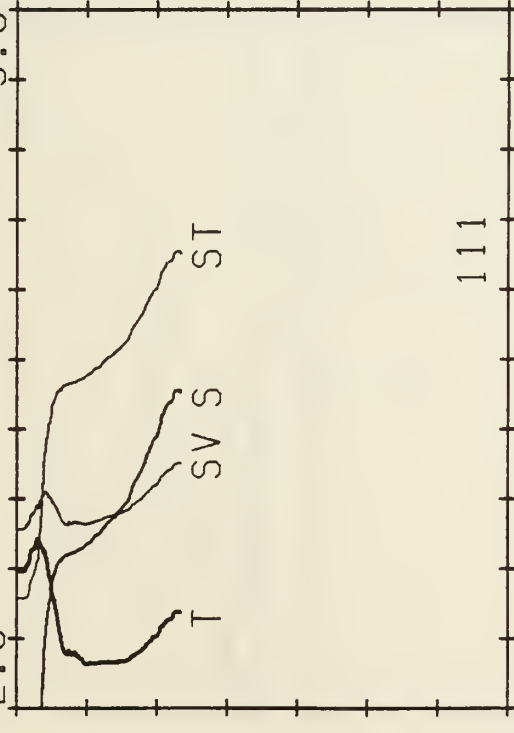
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DEG C

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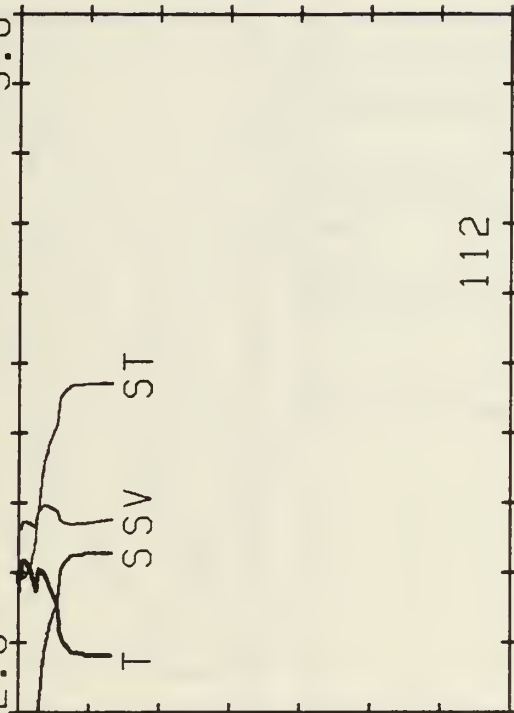
ST 23.5
SV 1425
S 31.0
T -2.0

28.5
1475
36.0
3.0



111

28.5
1425
31.0
-2.0



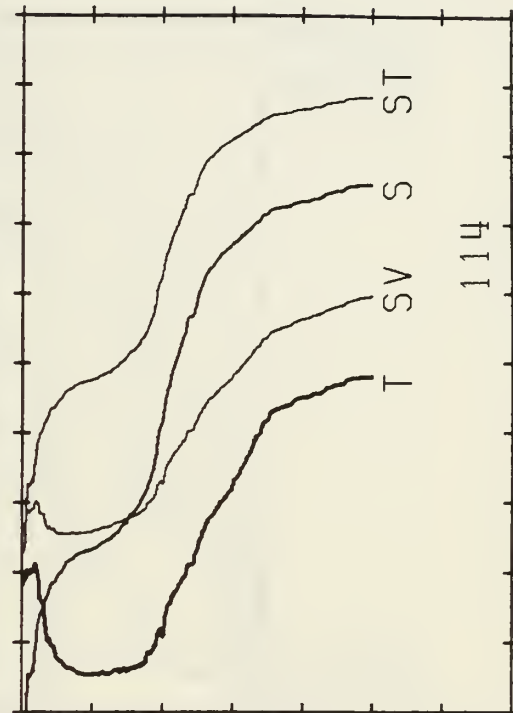
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P.P.T.
DEG C

MIZLANT84 C.T.D. STATIONS



113

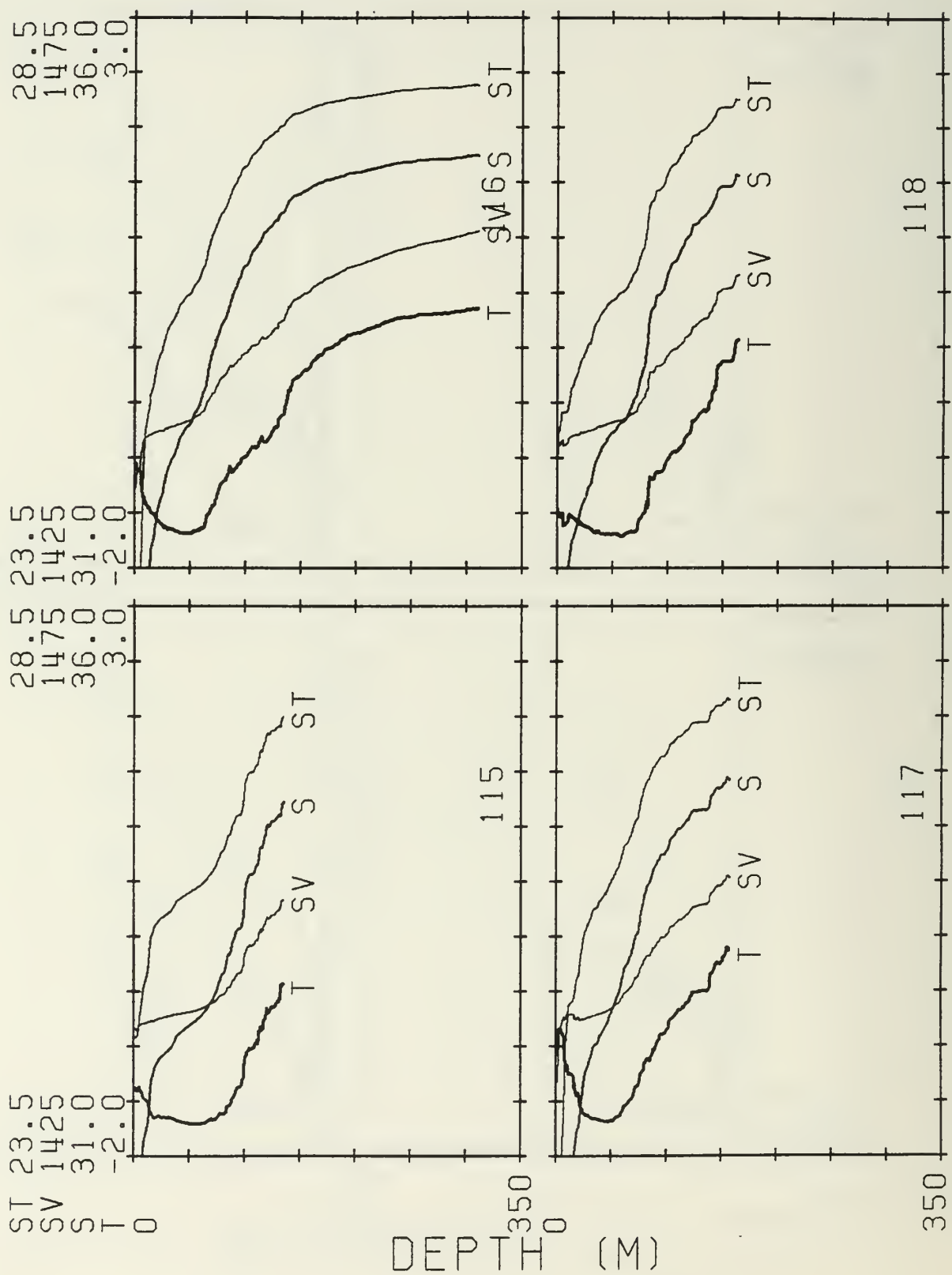


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DEPTH (M)

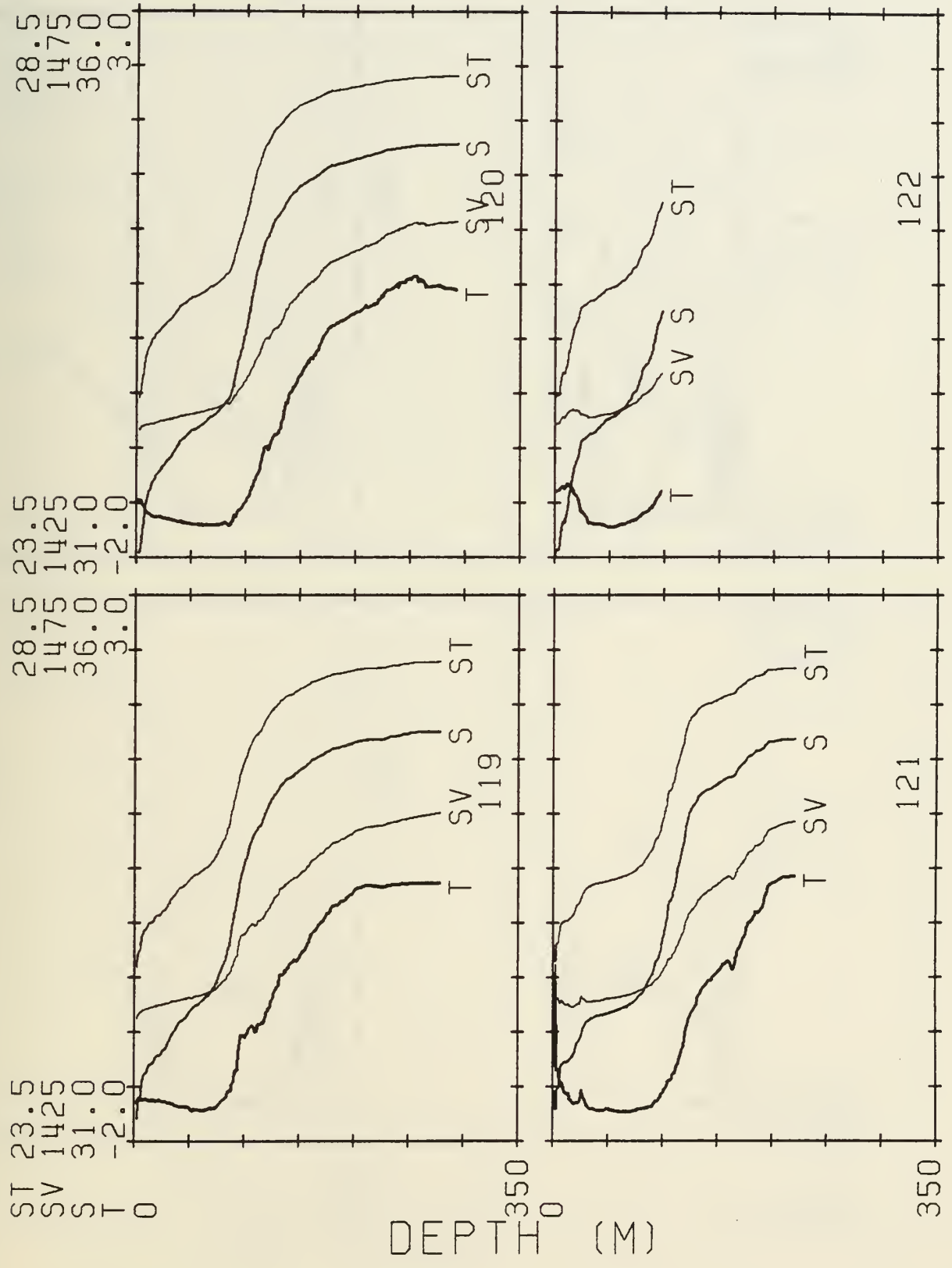
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MIZLANT84 C.T.D. STATIONS



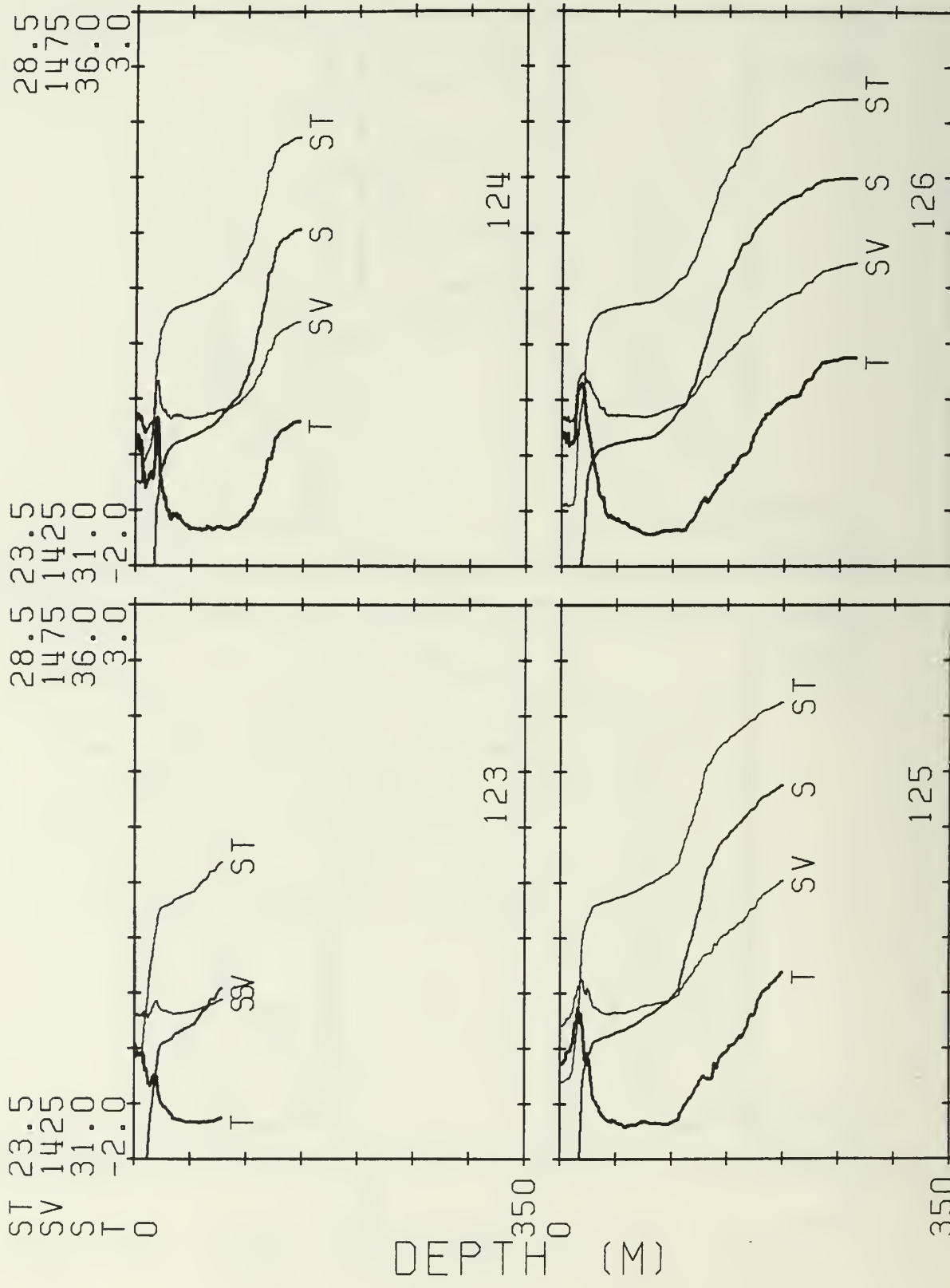
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DEG C

MIZLANT84 C.T.D. STATIONS



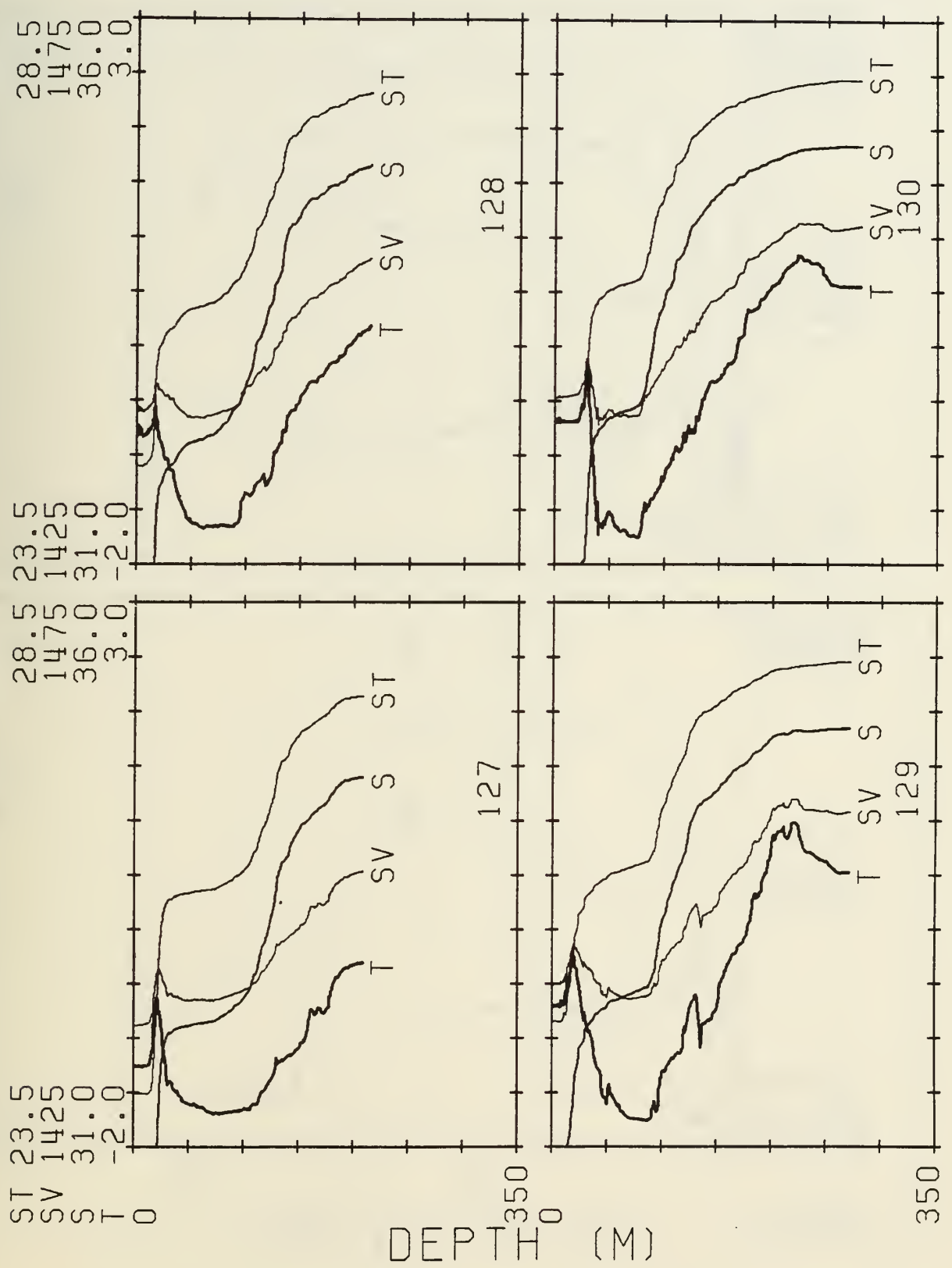
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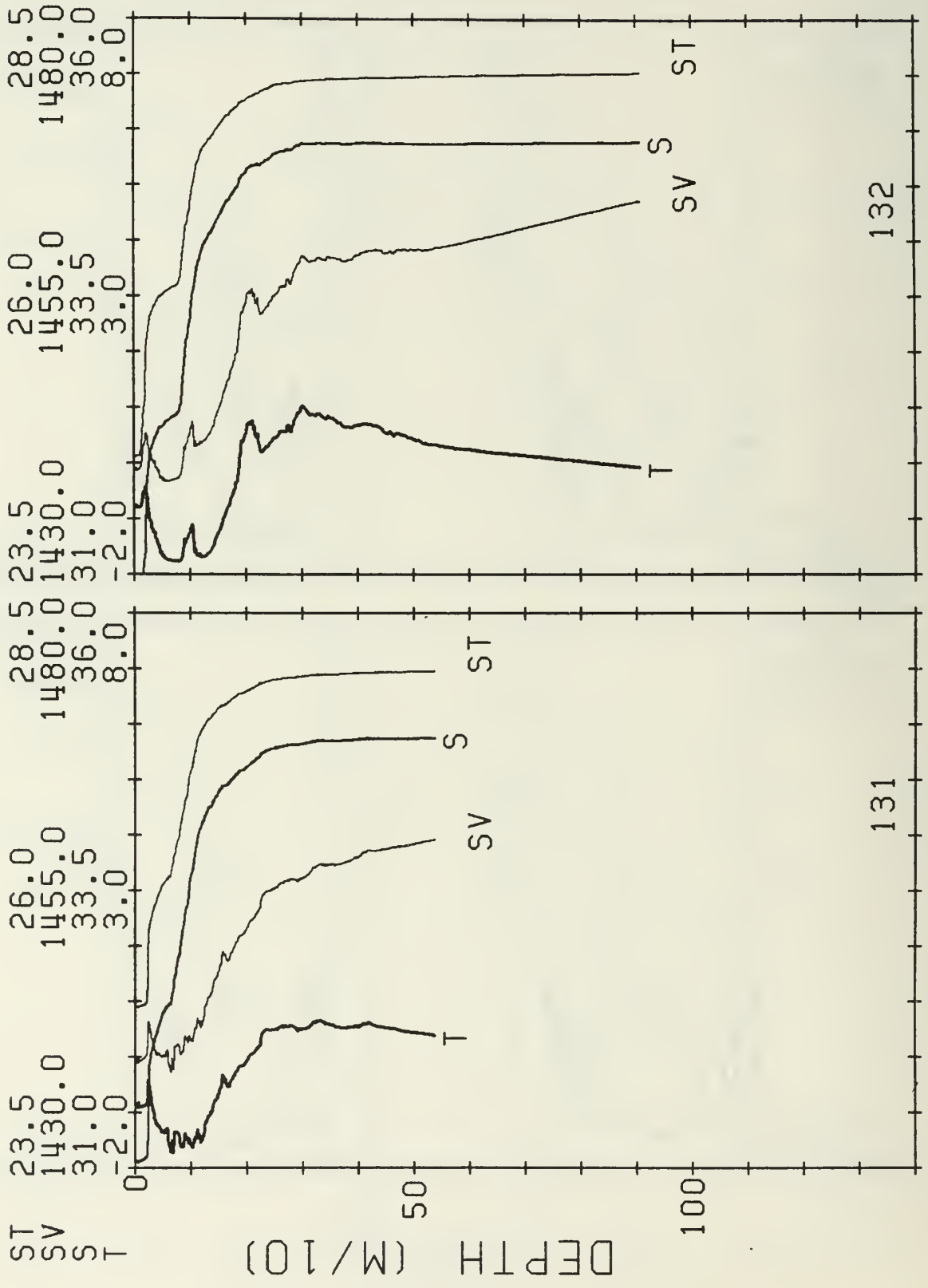
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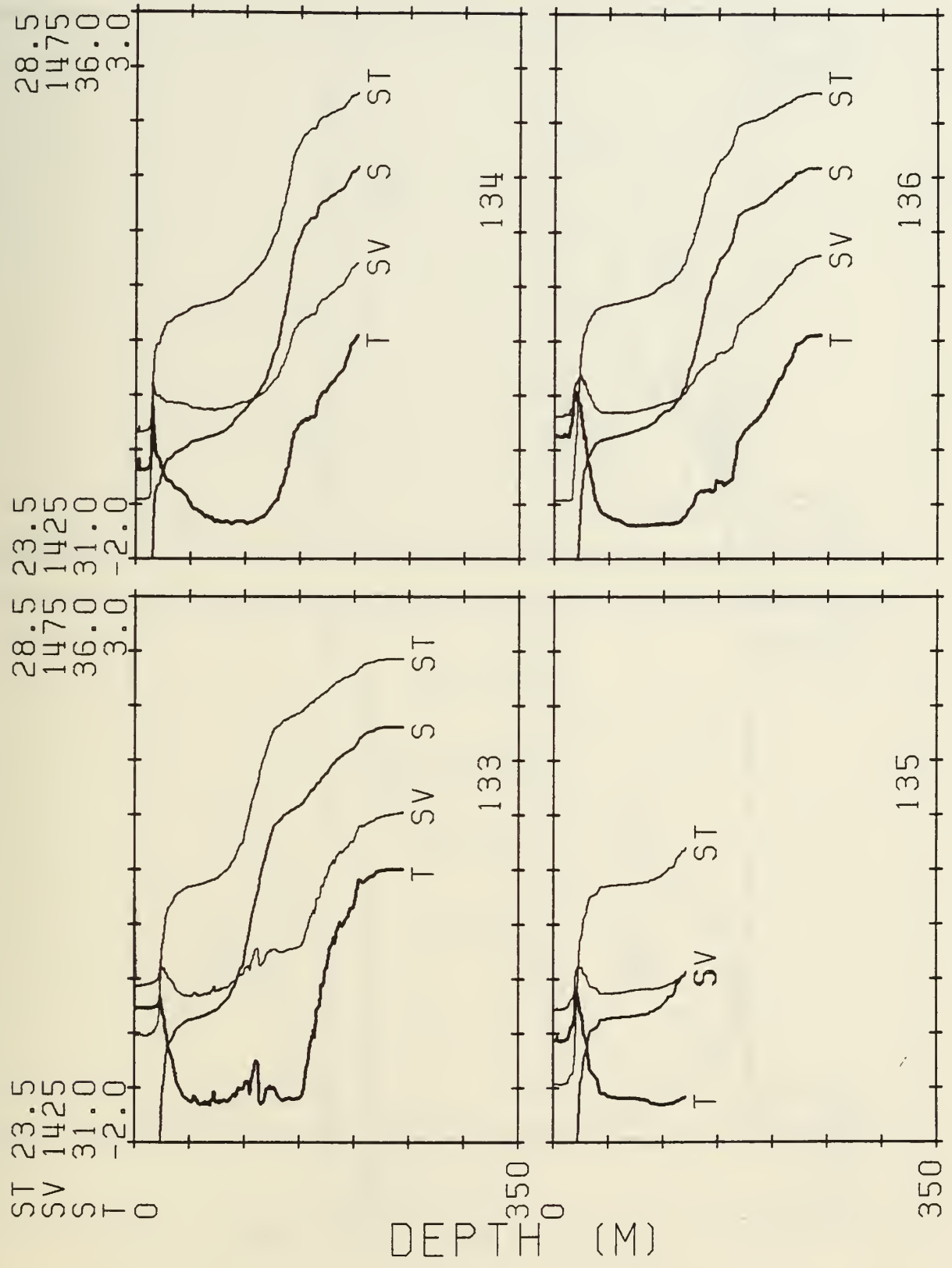
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DEG C

MIZLANT 84 CTD STATIONS



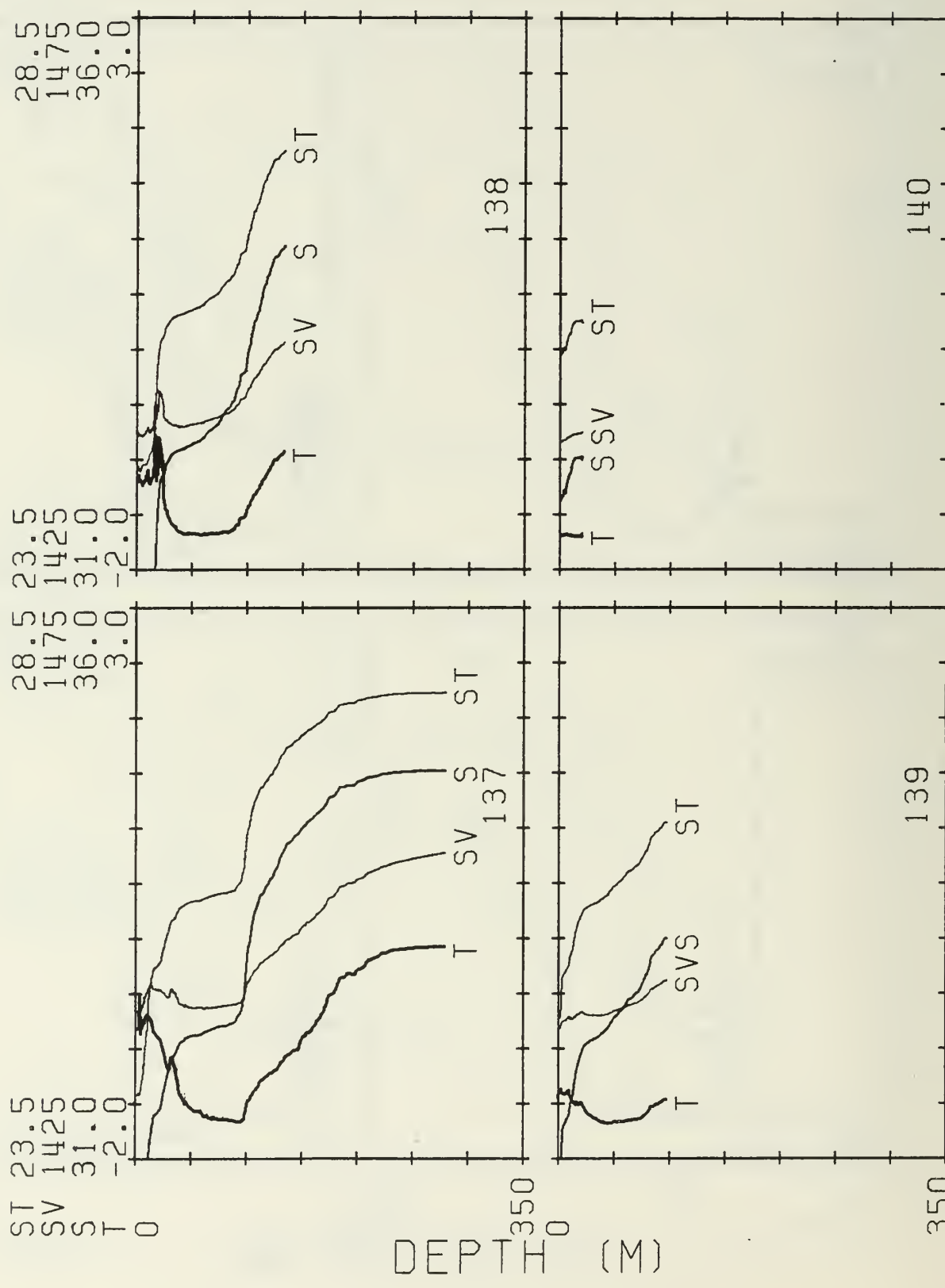
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MIZLANT84 C.T.D. STATIONS



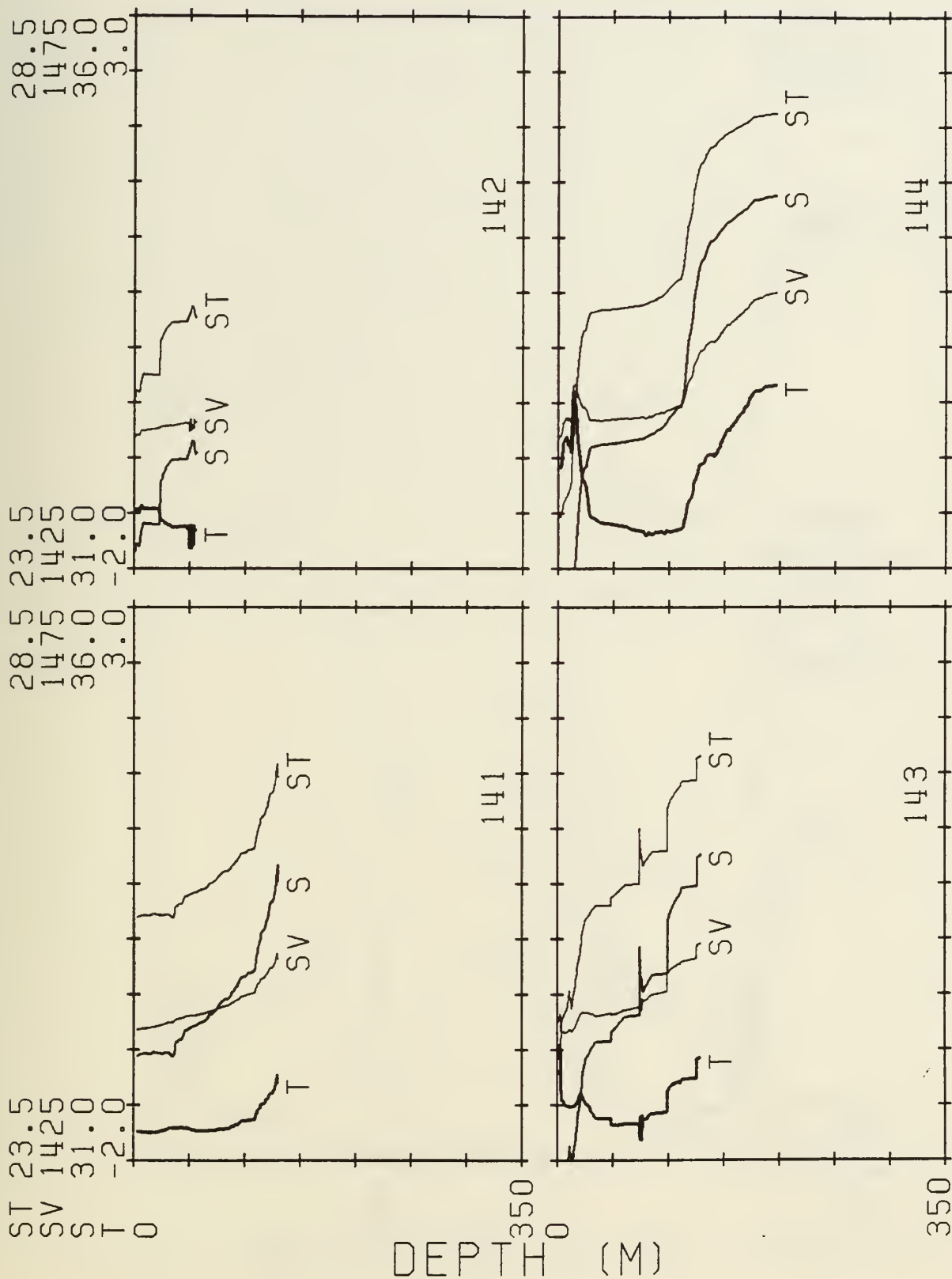
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DEG C

MIZLANT84 C.T.D. STATIONS



MG/CC
M/SEC
P.P.T.
DEG C

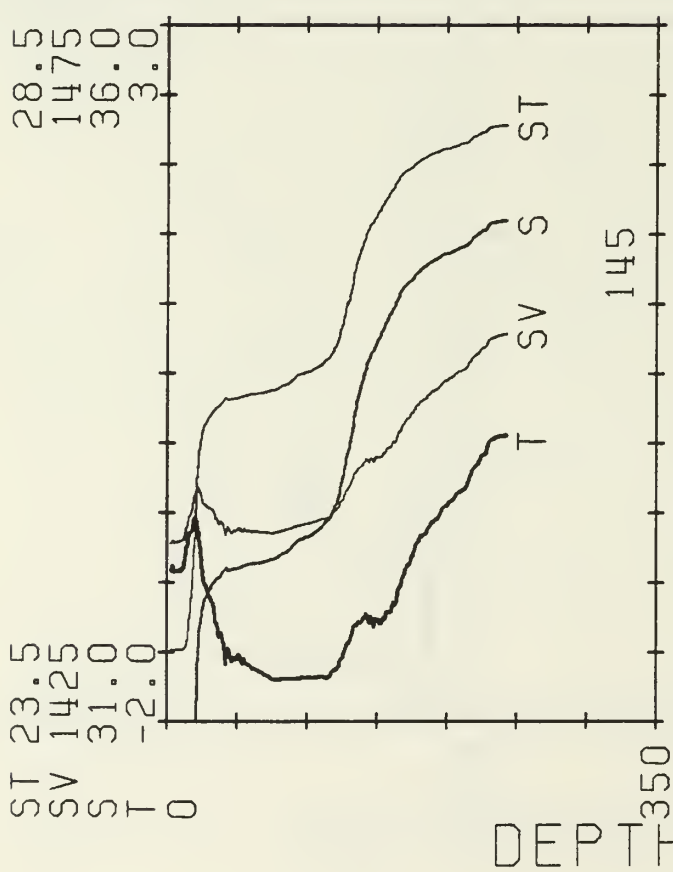
MIZLANT84 C.T.D. STATIONS



28.5 MG/CC
 1475 M/SEC
 36.0 P.P.T.
 3.0 DEG C

MIZLANT84 C.T.D. STATIONS

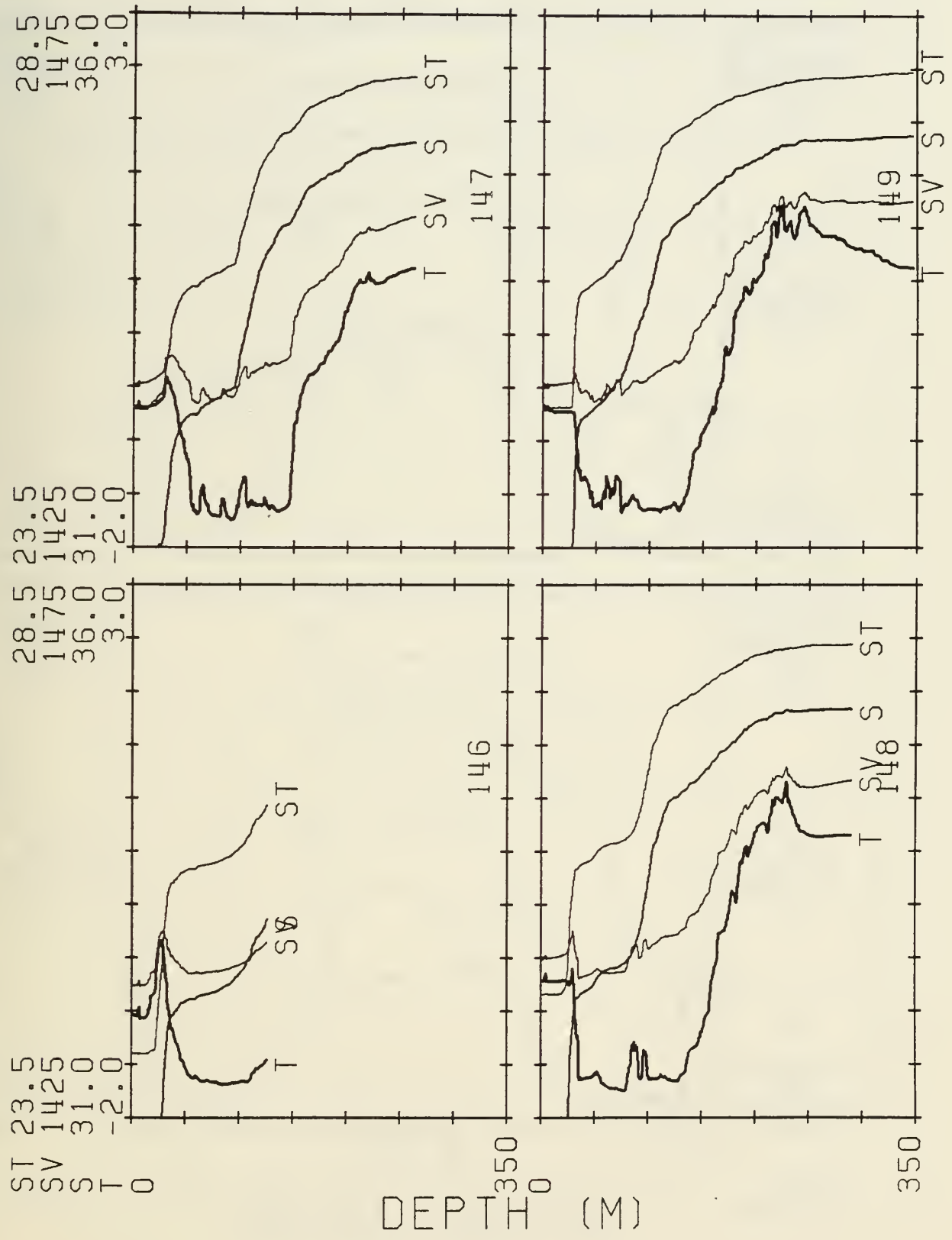
ST 23.5
 SV 1425
 S 31.0
 T -2.0



DEPT H (M)

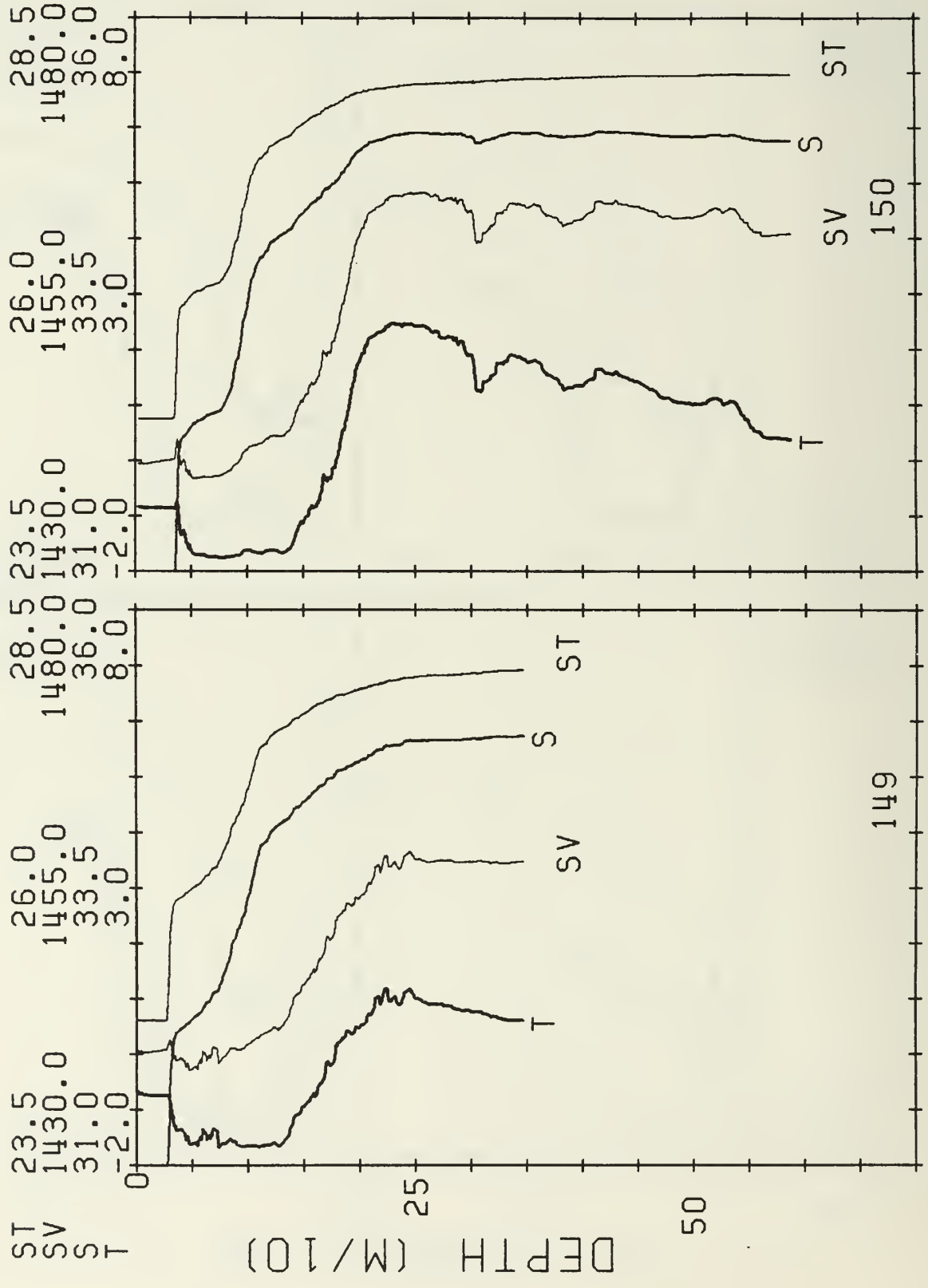
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P.P.T.
DEG C

MIZLANT84 C.T.D. STATIONS



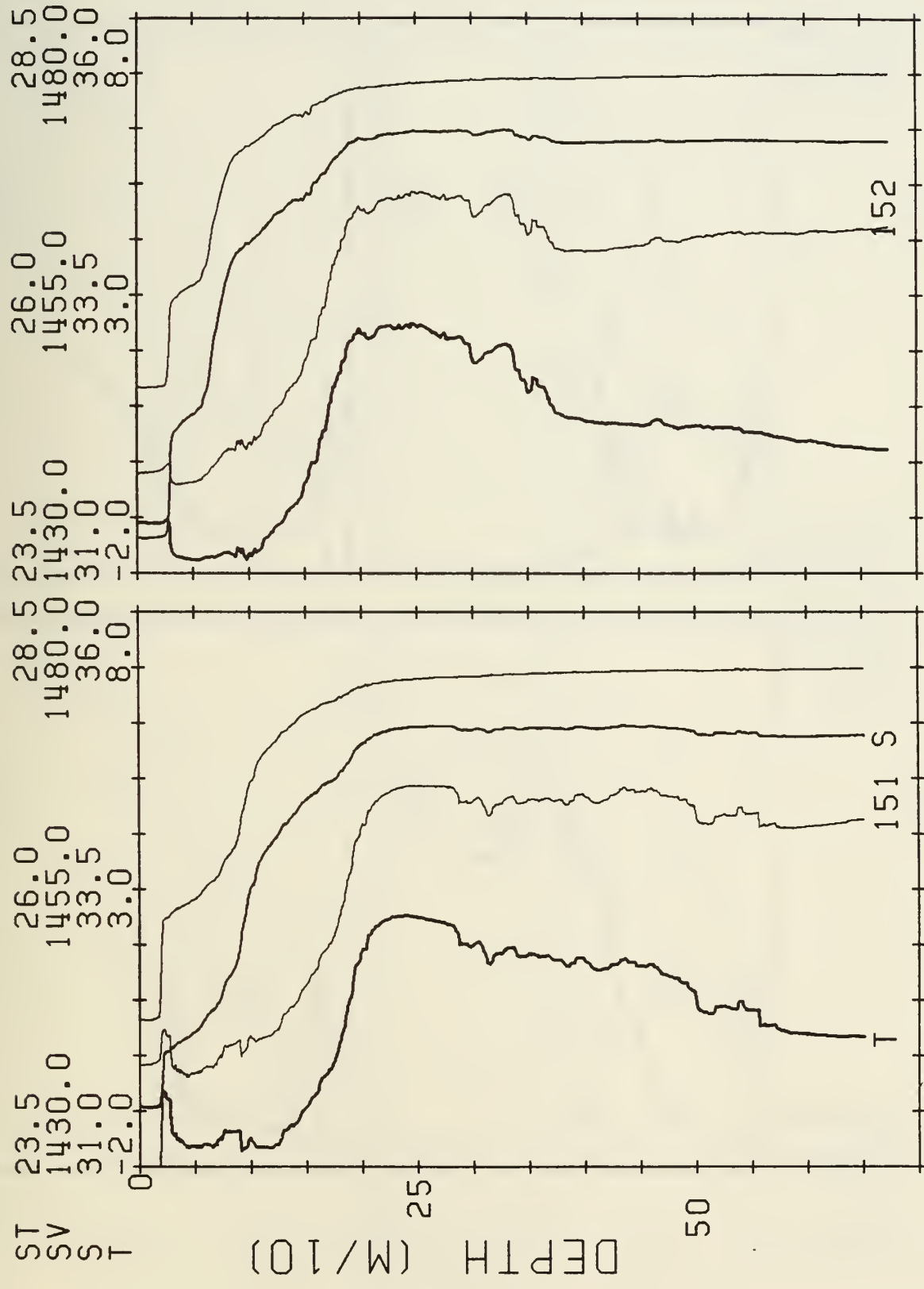
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P.P.T.
DEG C

MIZLANT 84 CTD STATIONS



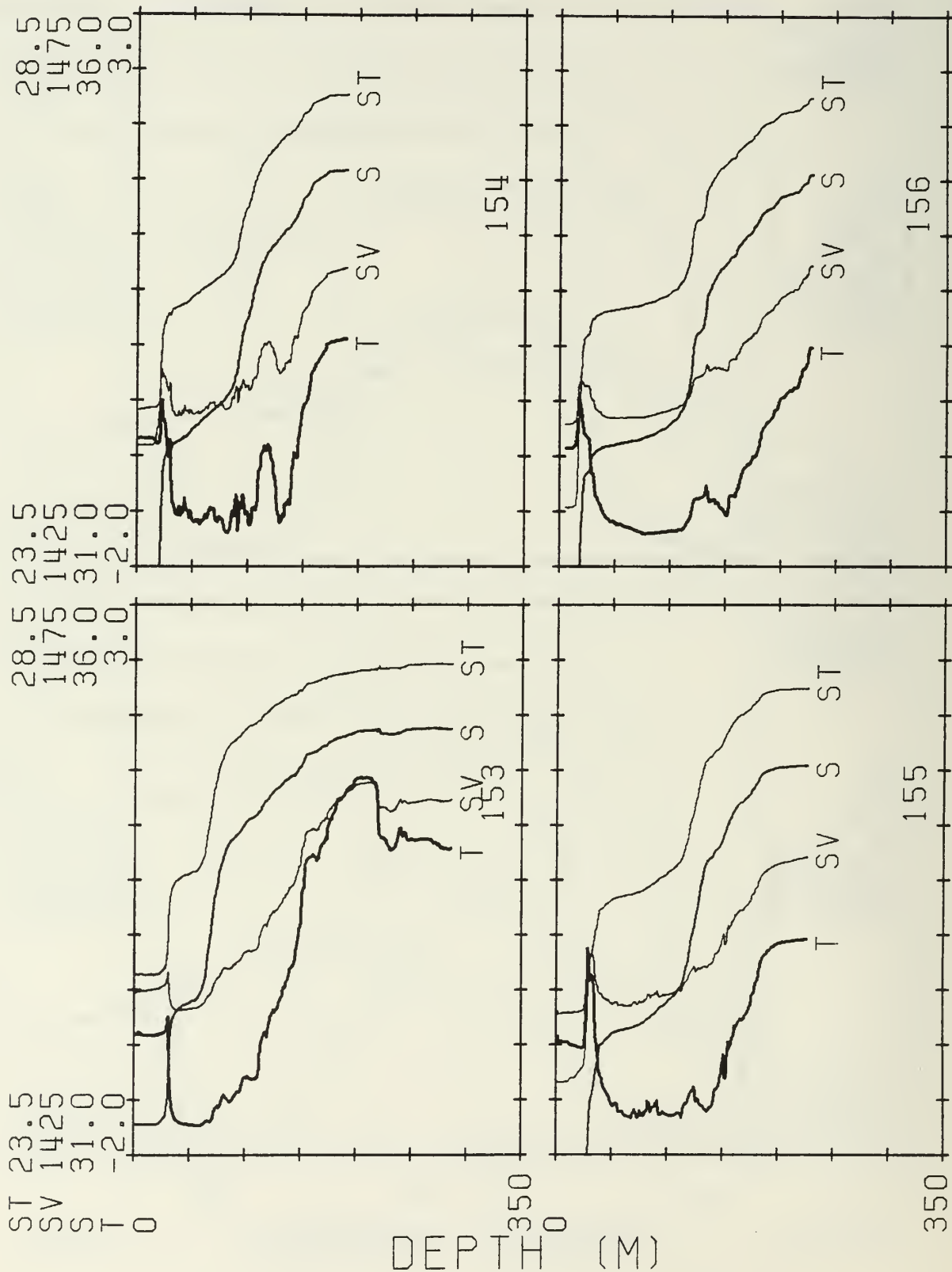
MIZLANT 84 CTD STATIONS

MG/CC
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P.P.T.
DEG C



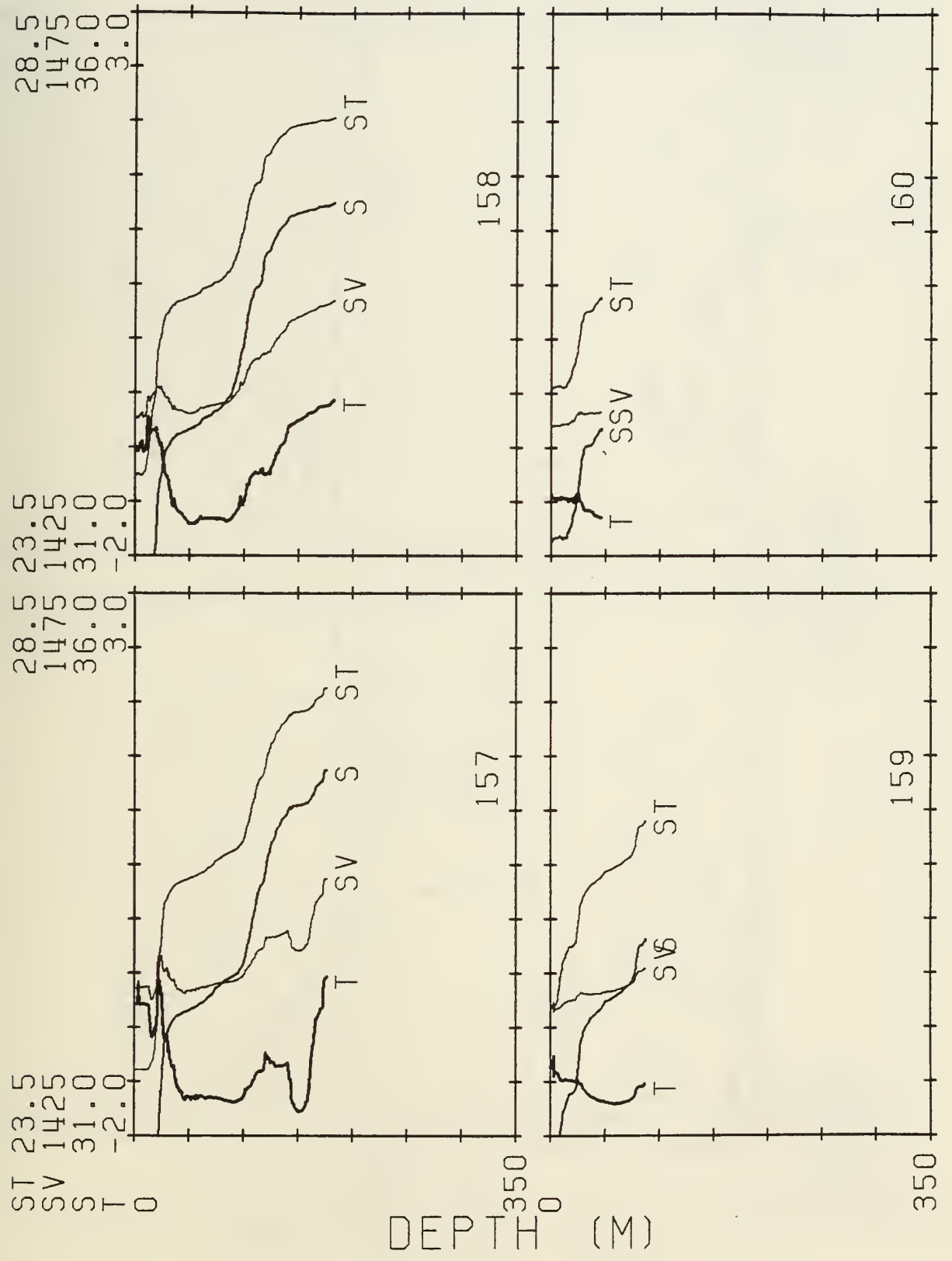
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MIZLANT84 C.T.D. STATIONS



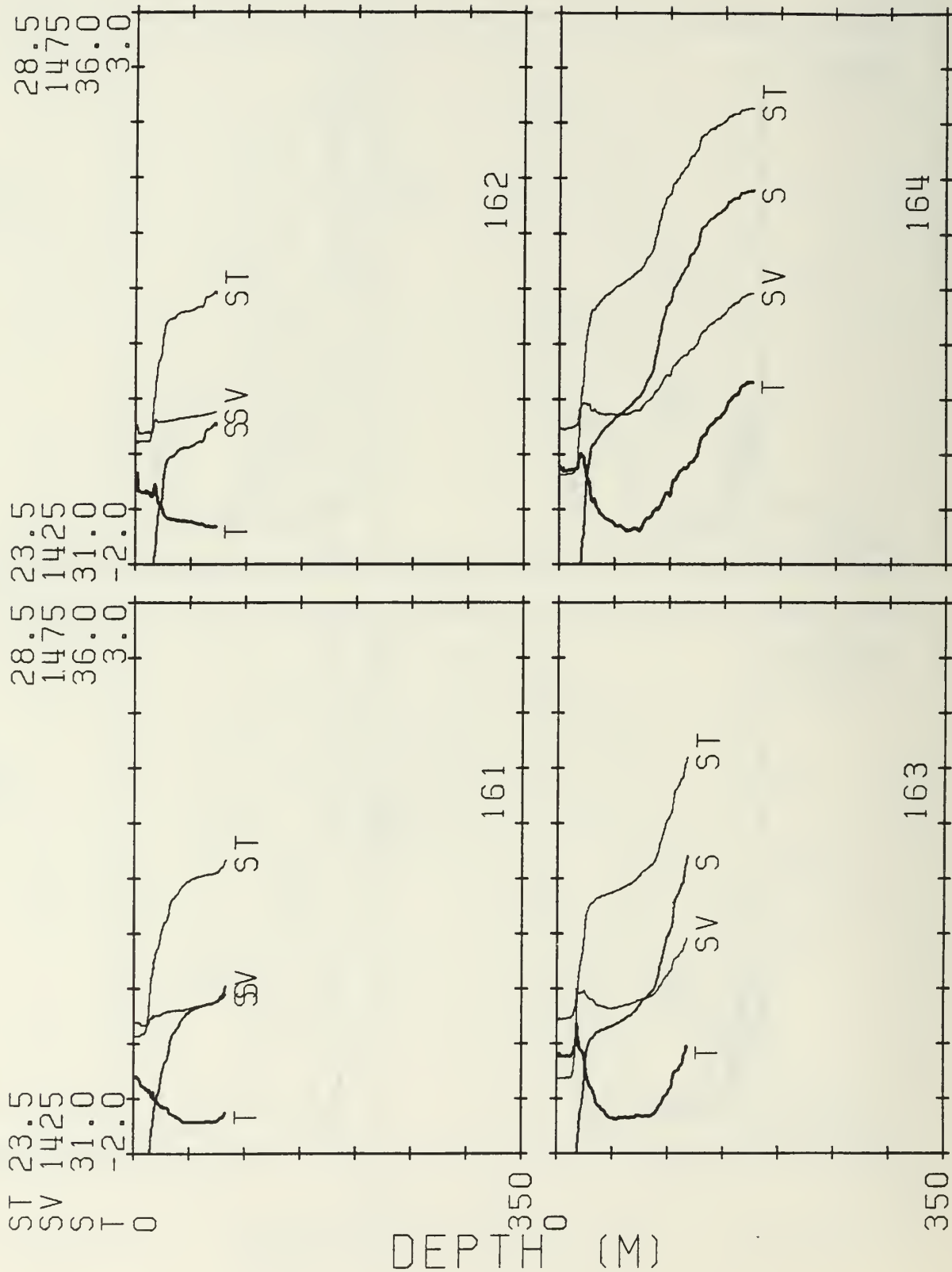
MG/CC
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 DEG C

MIZLANT84 C.T.D. STATIONS



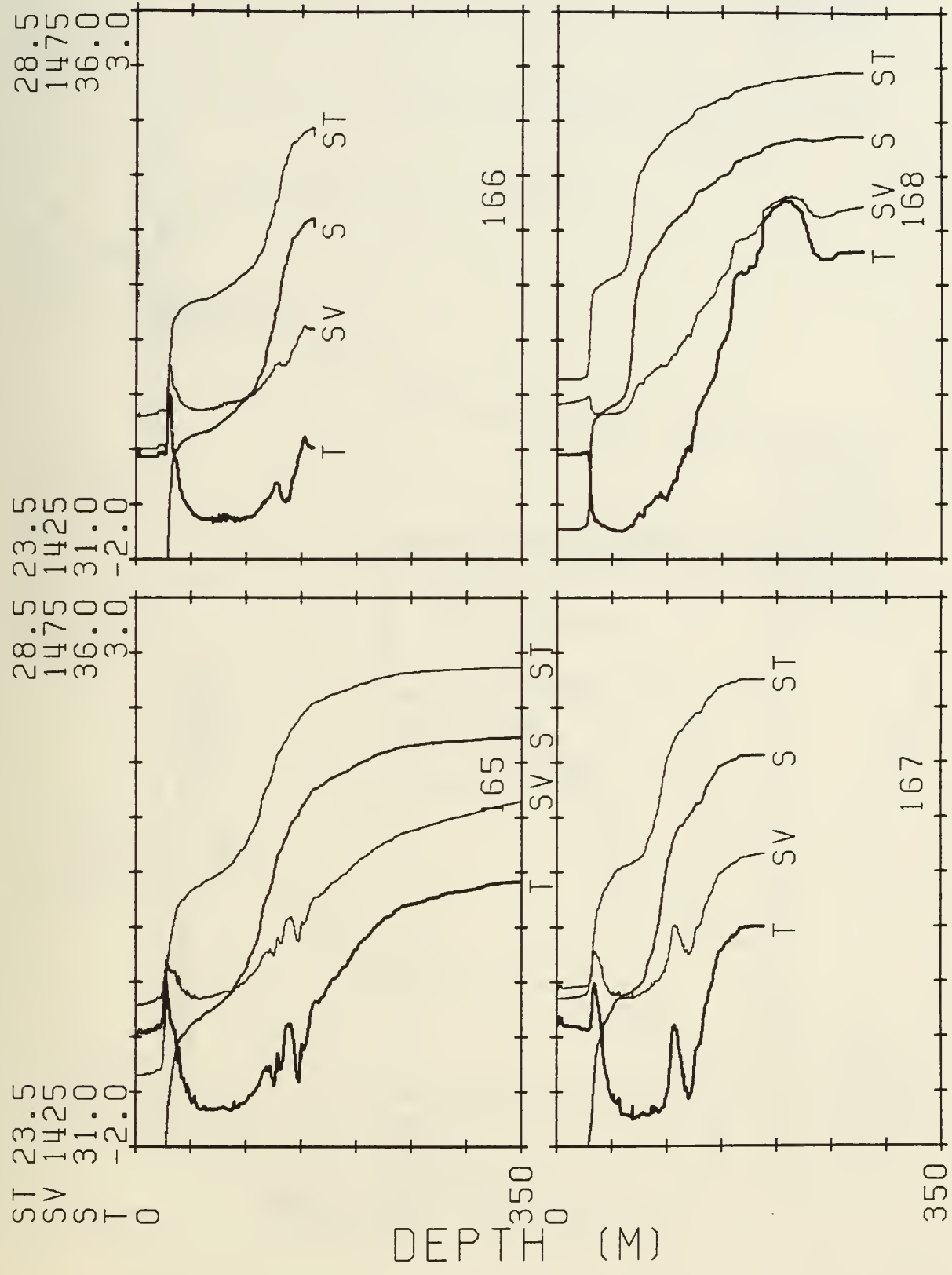
MG/CC
M/SEC
P.P.T.
DEG C

MIZLANT84 C.T.D. STATIONS



MG/CC
M/SEC
P.P.T.
DEG C

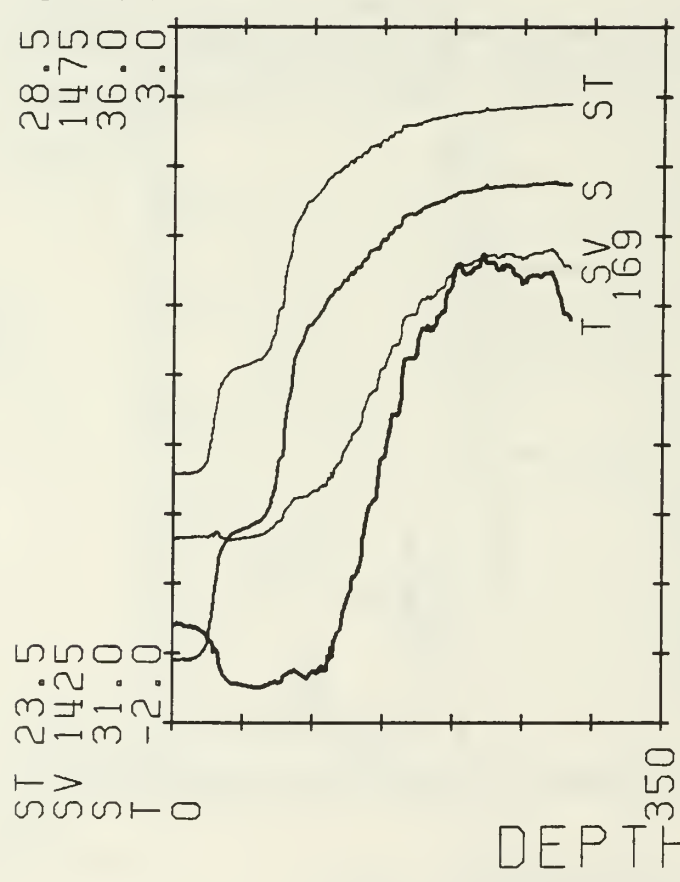
MIZLANT84 C.T.D. STATIONS



28.5 MG/CC
 1475 M/SEC
 36.0 P.P.T.
 3.0 DEG C

MIZLANT84 C.T.D. STATIONS

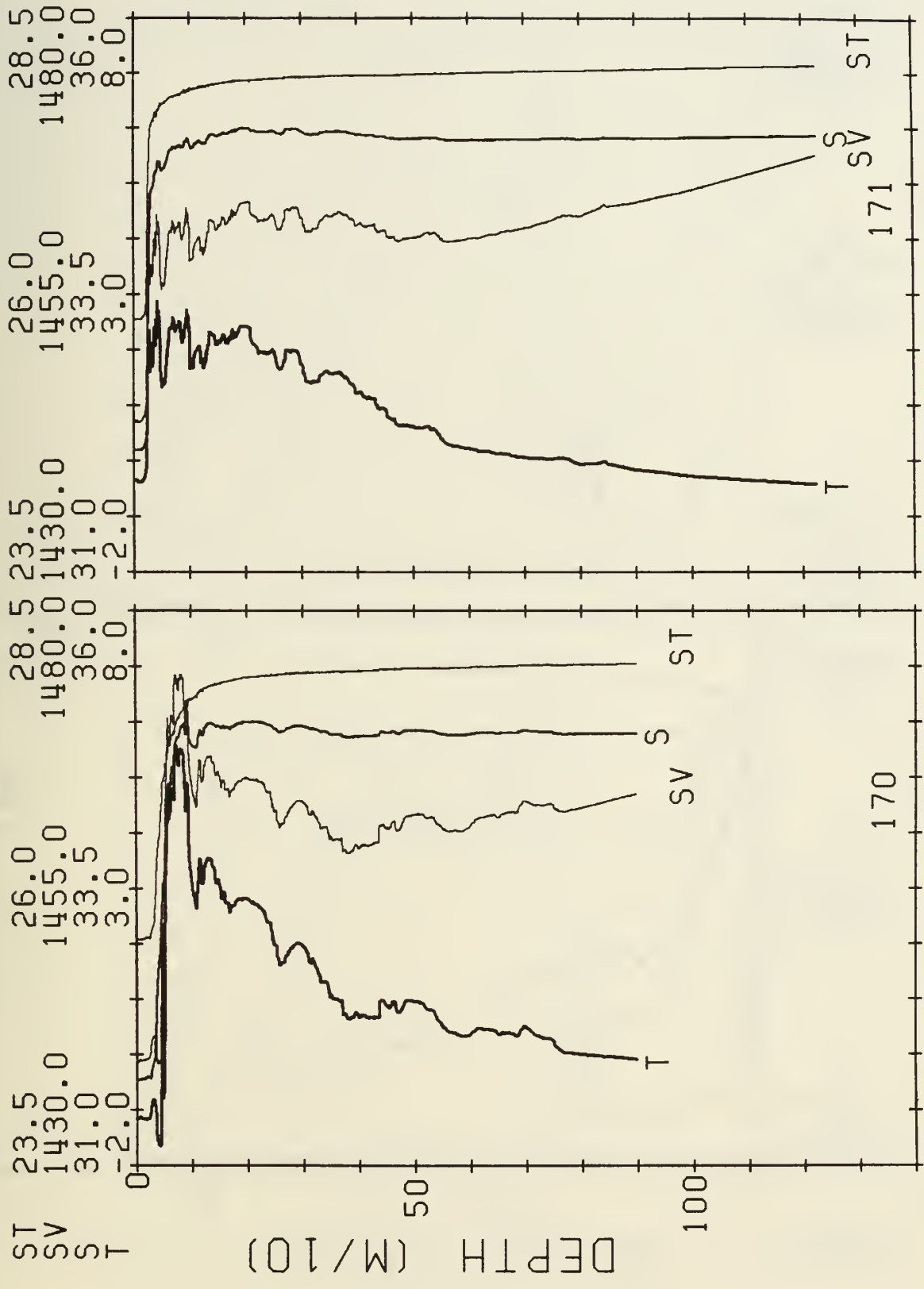
ST 23.5
 SV 1425
 ST 31.0
 T 0 -2.0



DEPTH (M)

MG/CC
M/SEC
P.P.T.
DEG C

MIZLANT 84 CTD STATIONS



28.5 MG/CC
1480.0 M/SEC
36.0 P.P.T.
8.0 DEG C

26.0
1455.0
33.5
3.0

23.5 23.5
1430.0 1430.0
31.0 31.0
-2.0 -2.0

28.5 28.5
1480.0 1480.0
36.0 36.0
8.0 8.0

26.0 26.0
1455.0 1455.0
33.5 33.5
3.0 3.0

23.5 23.5
1430.0 1430.0
31.0 31.0
-2.0 -2.0

ST
SV
S
T

MIZLANT 84 CTD STATIONS

DEPTH (M/10)

50

100

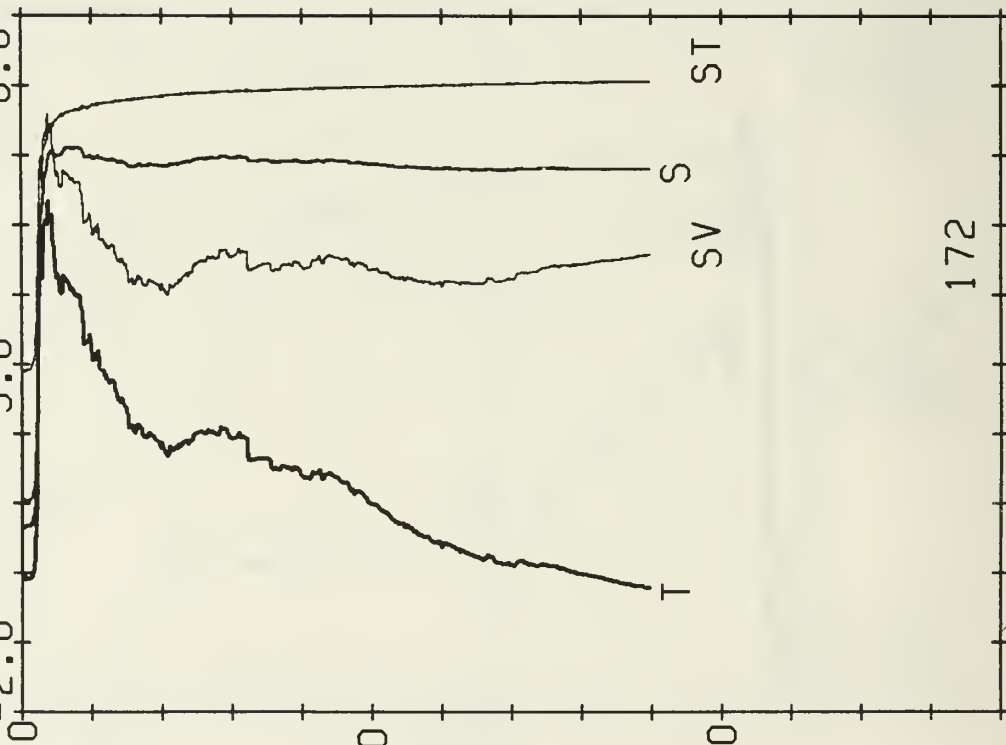
172

ST

S

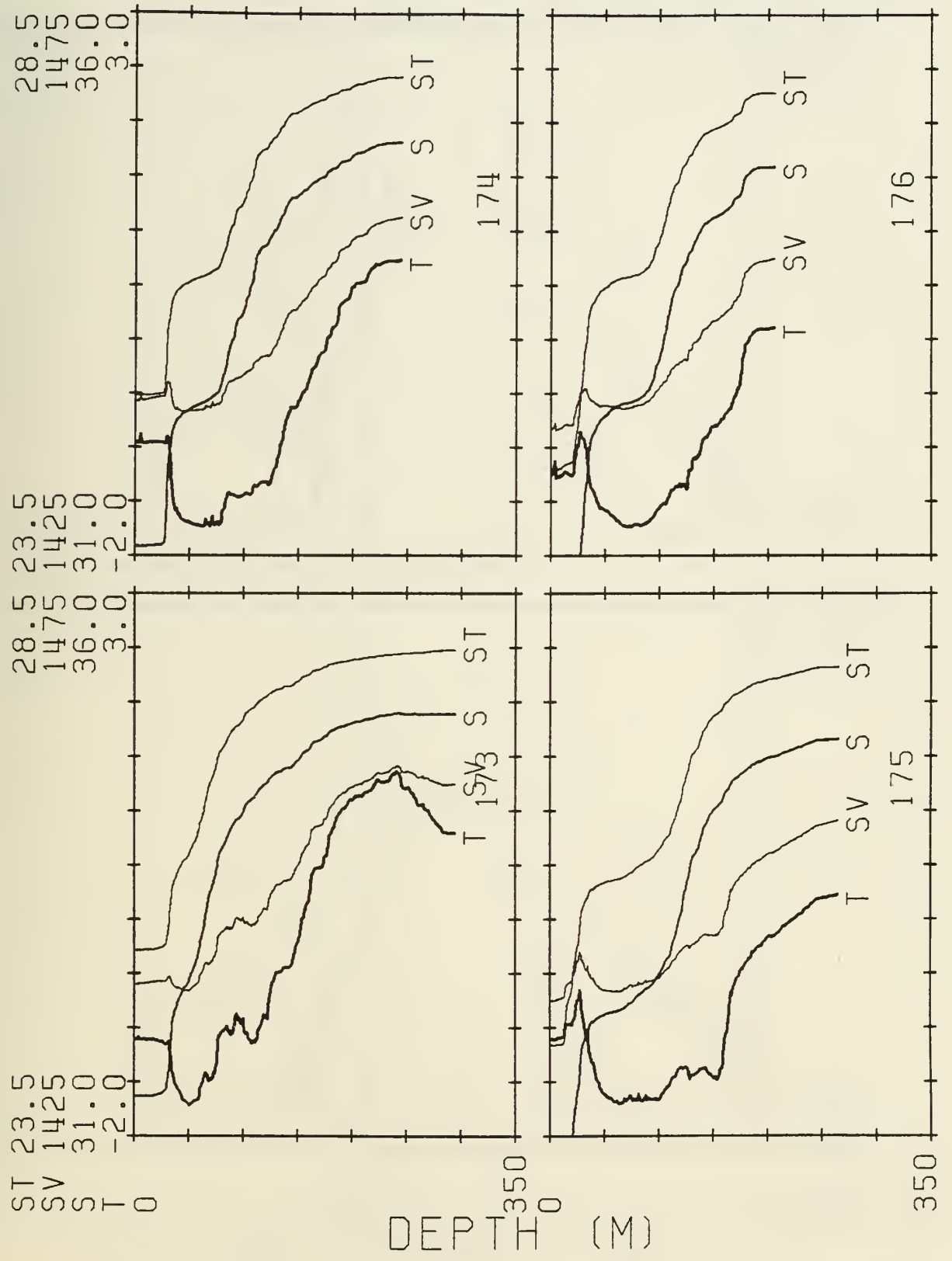
SV

T



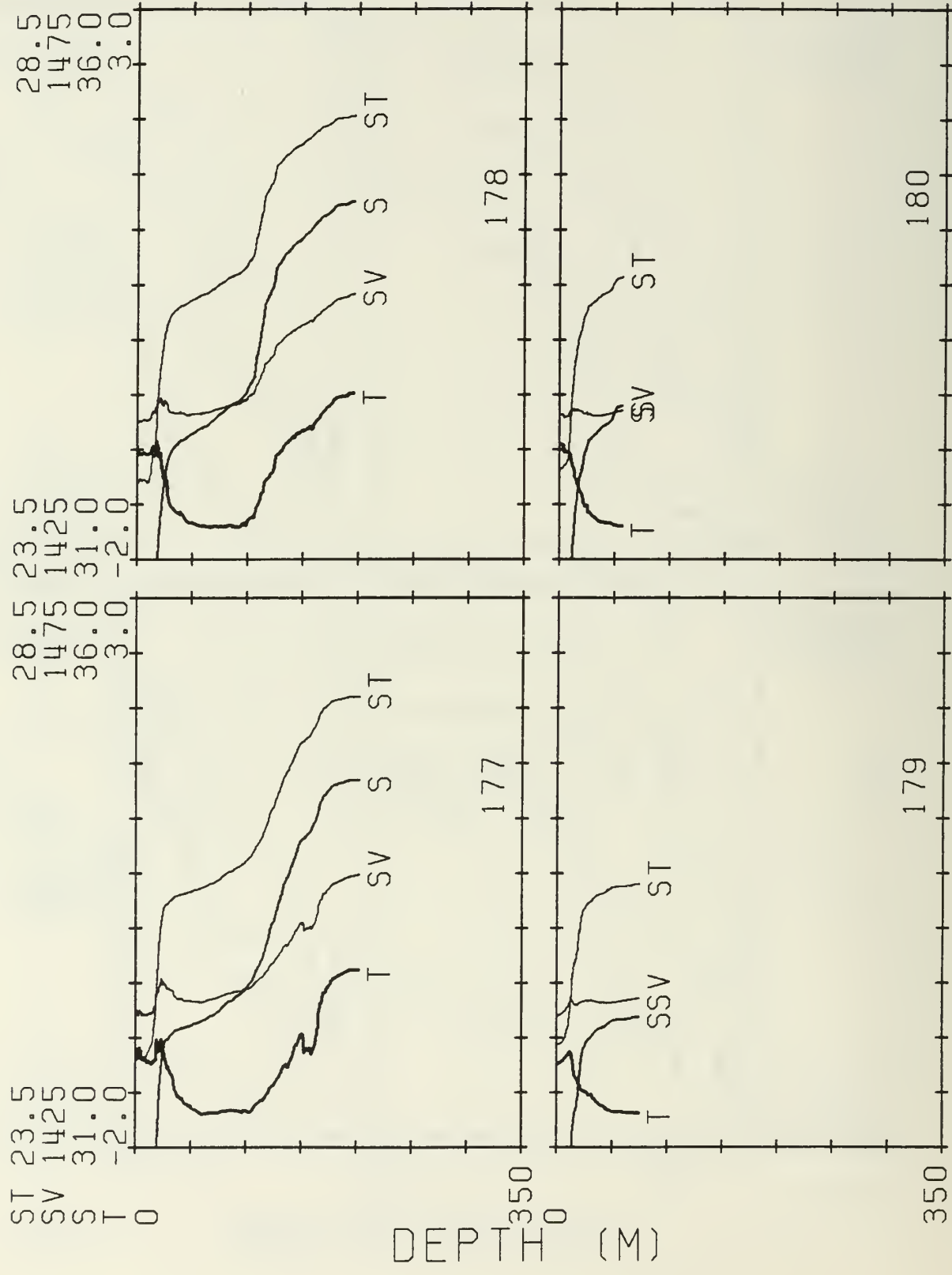
MG/CC
 M/SEC
 P.P.T.
 DEG C

MIZLANT84 C.T.D. STATIONS



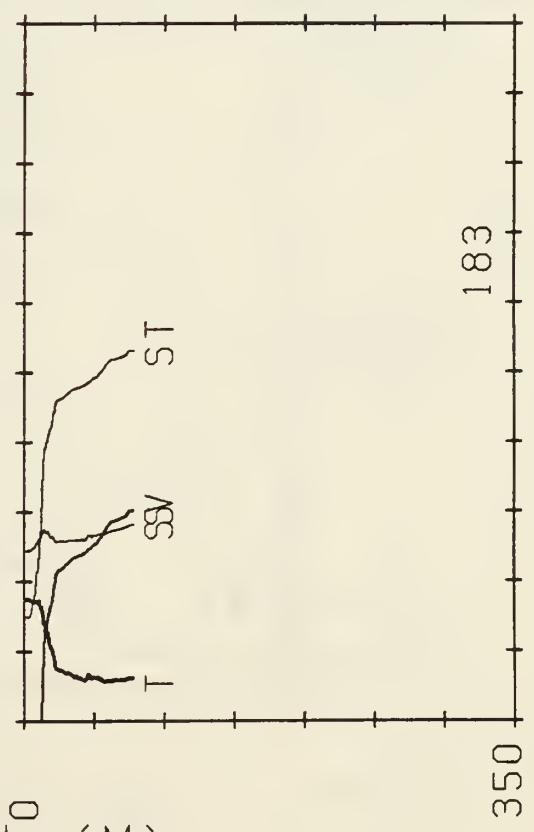
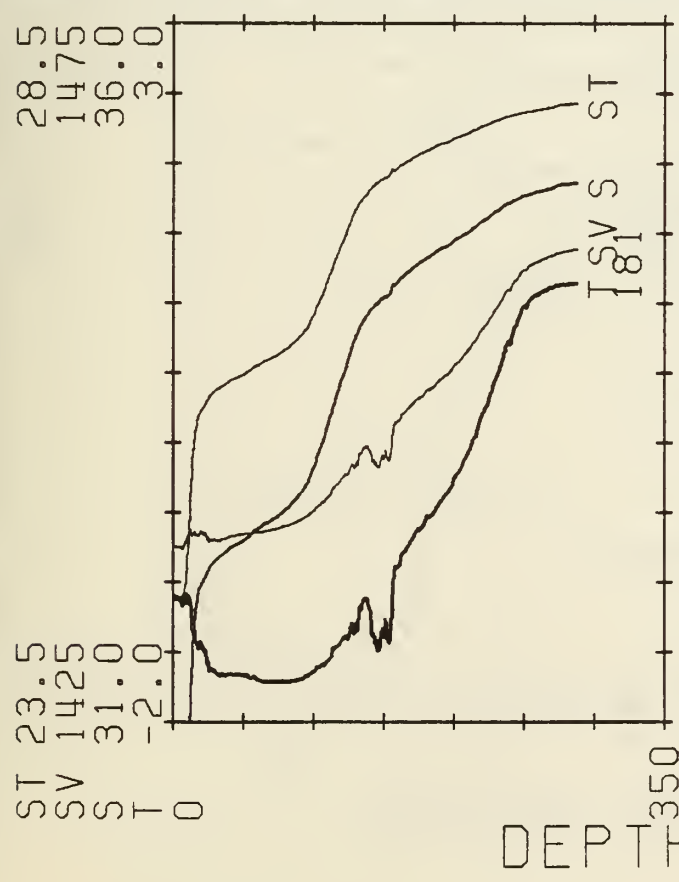
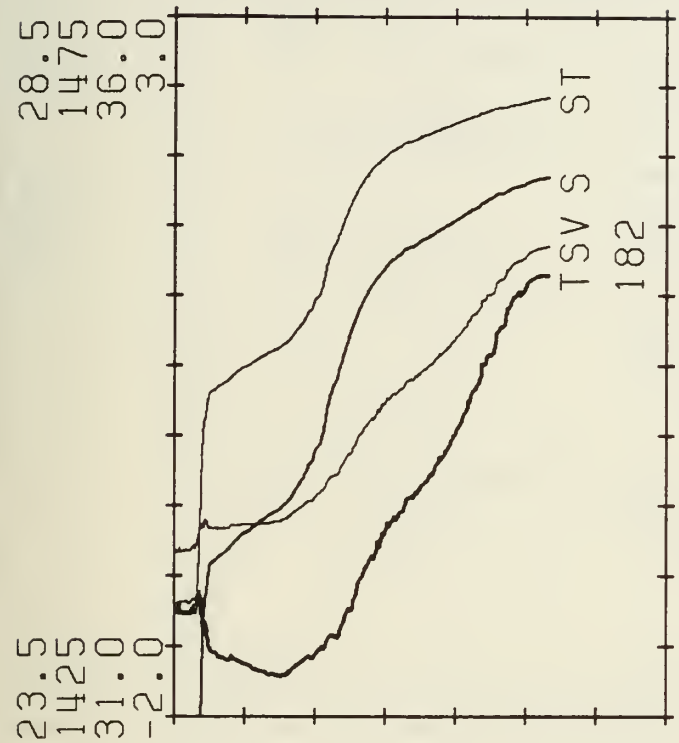
MG/CC
M/SEC
P.P.T.
DEG C

MIZLANT84 C.T.D. STATIONS



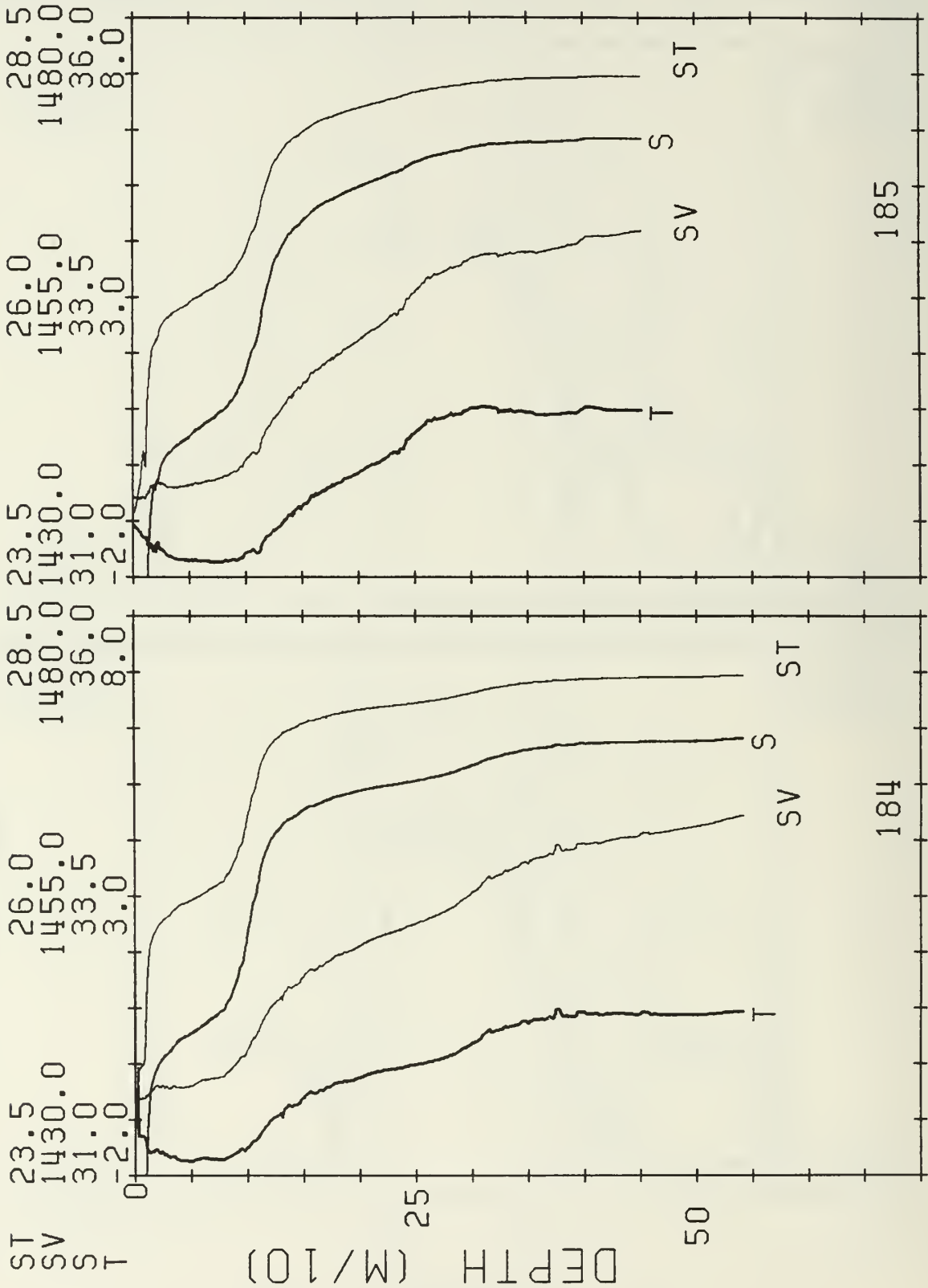
MG/CC
M/SEC
P.P.T.
DEG C

MIZLANT84 C.T.D. STATIONS



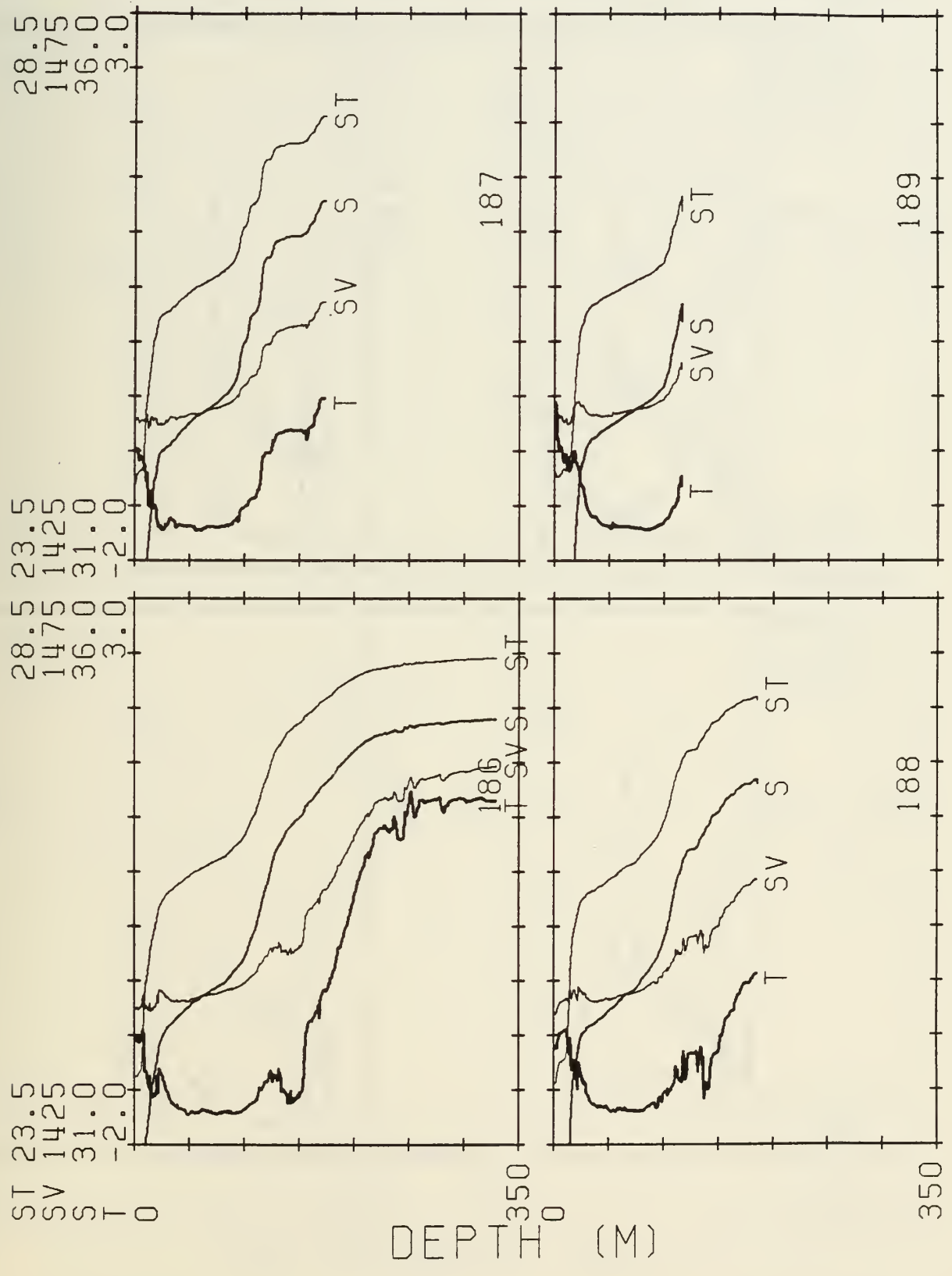
MG/CC
M/SEC
P.P.T.
DEG C

MIZLANT 84 CTD STATIONS



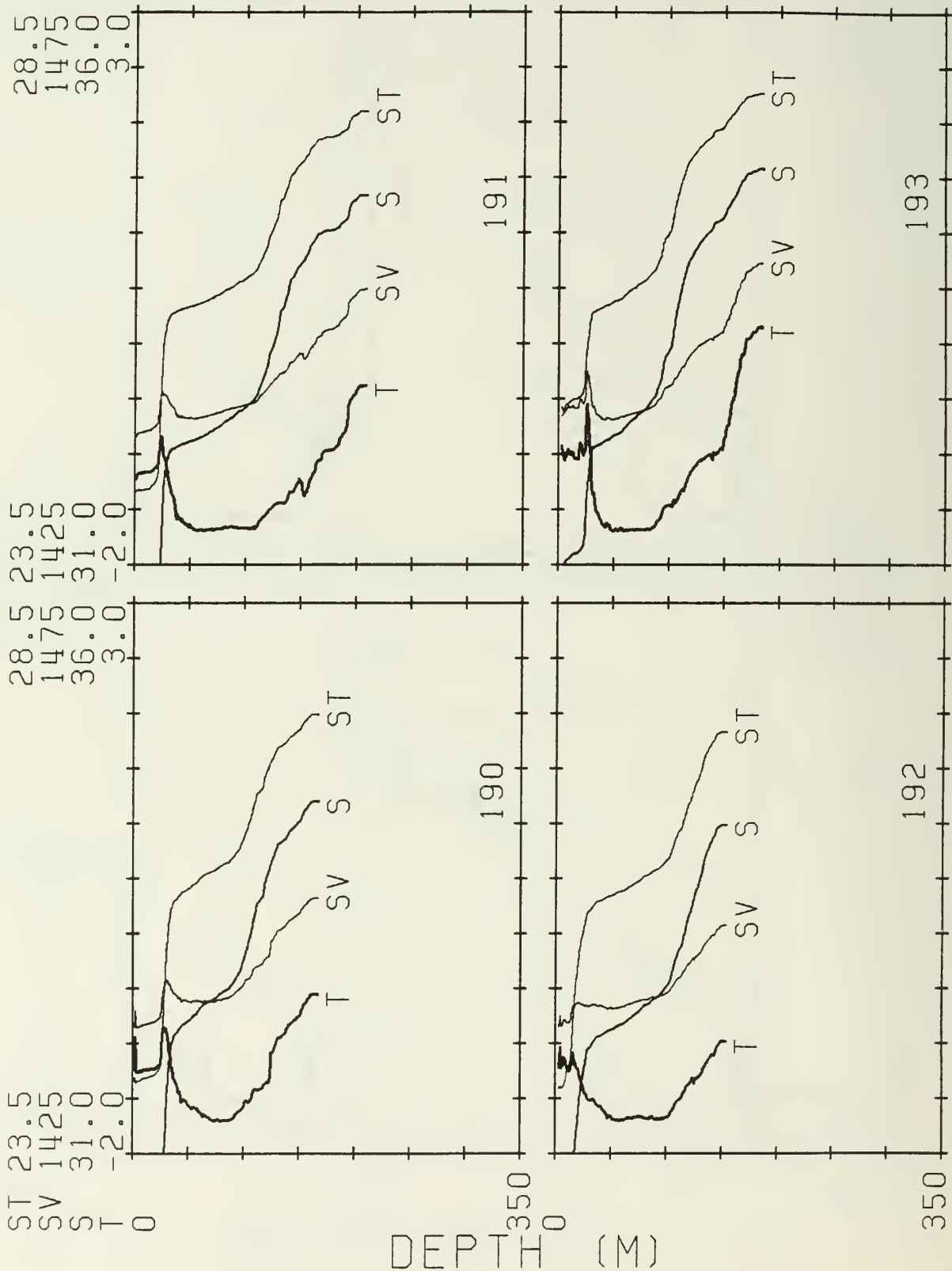
MG/CC
M/SEC
P.P.T.
DEG C

MIZLANT84 C.T.D. STATIONS



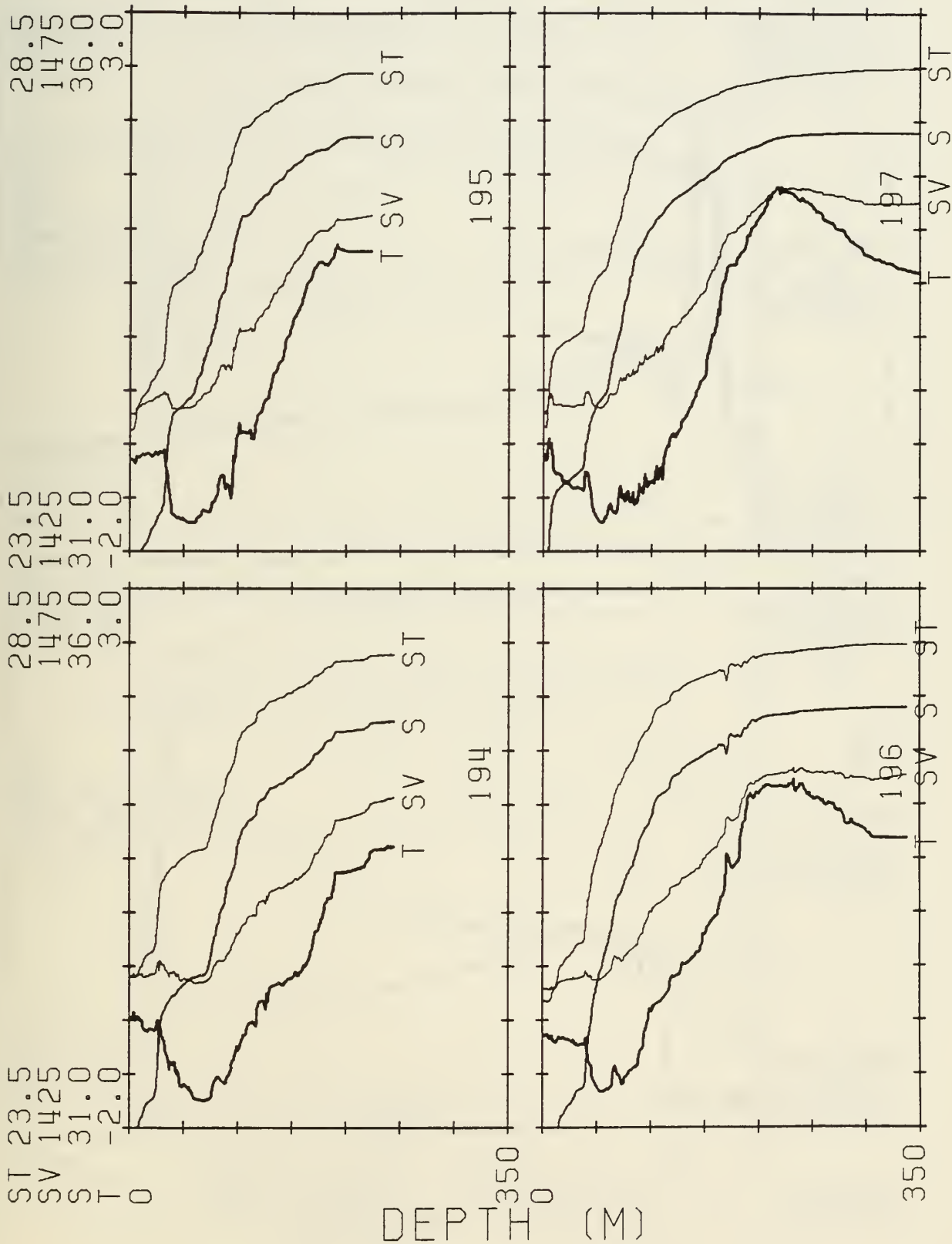
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M/SEC
P.P.T.
DEG C

MIZLANT84 C.T.D. STATIONS



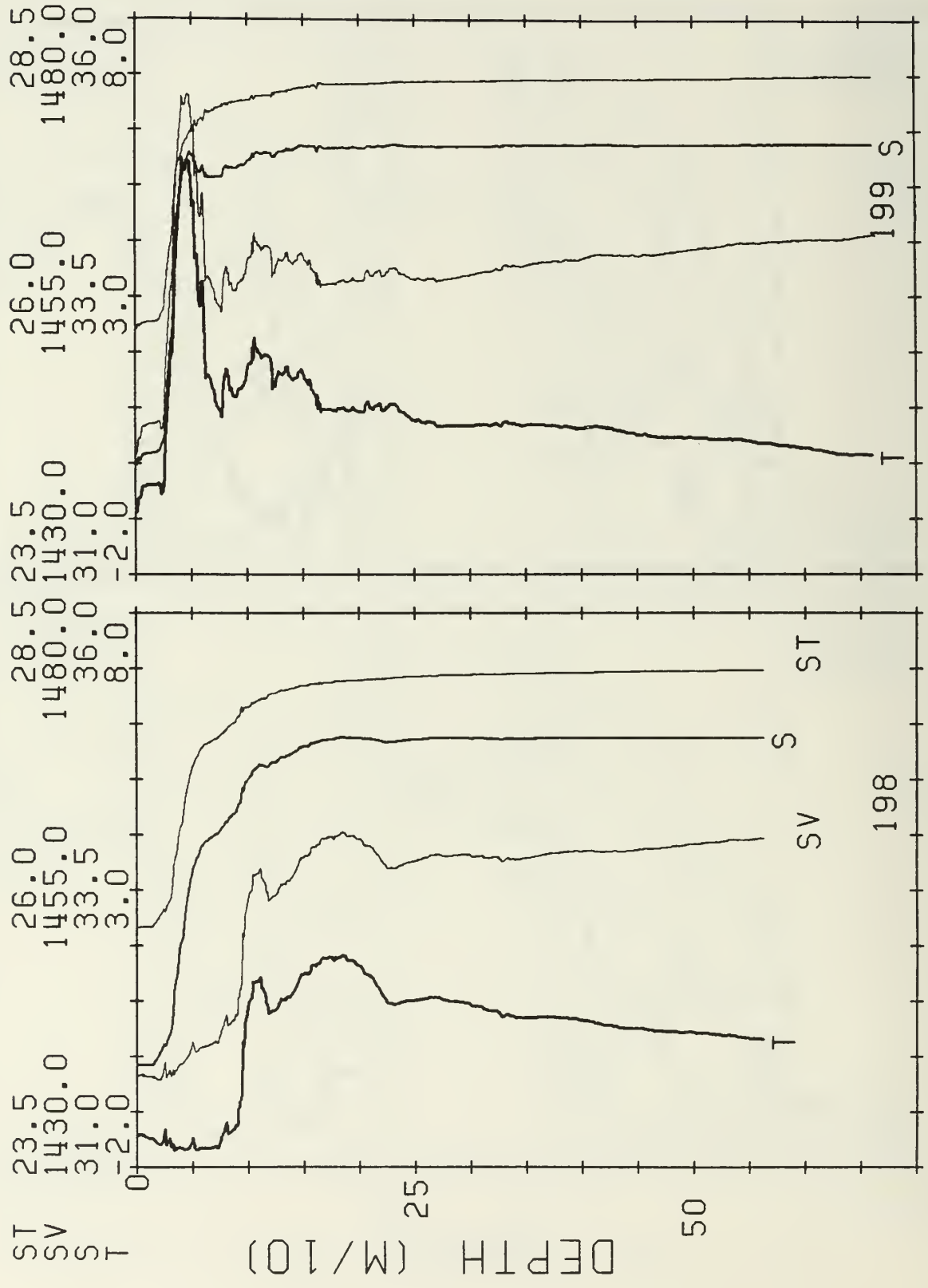
MG/CC
M/SEC
P.P.T.
DEG C

MIZLANT84 C.T.D. STATIONS



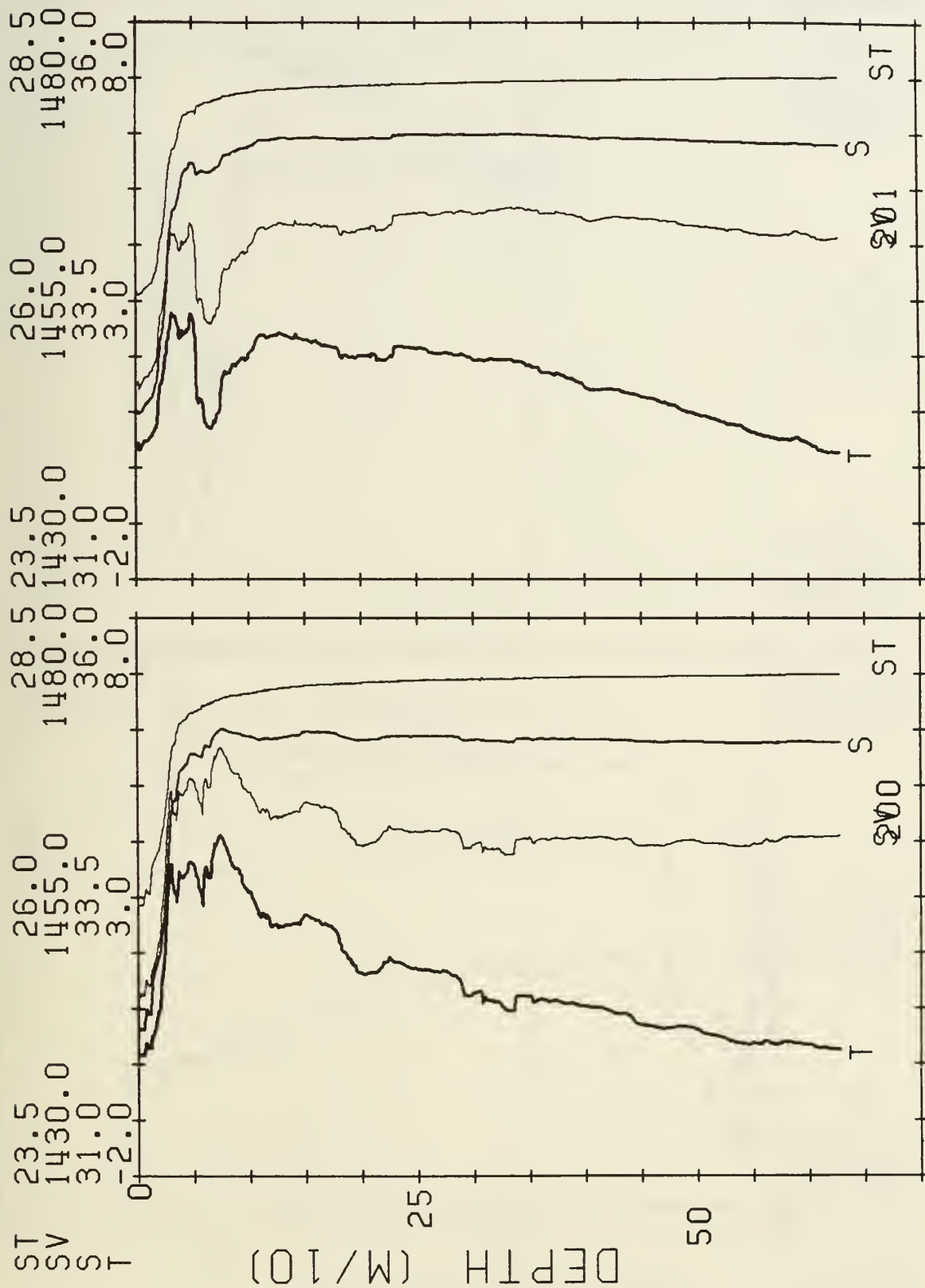
MG/CC
M/SEC
P.P.T.
DEG.C

MIZLANT 84 CTD STATIONS



MG/CC
M/SEC
P.P.T.
DEG C

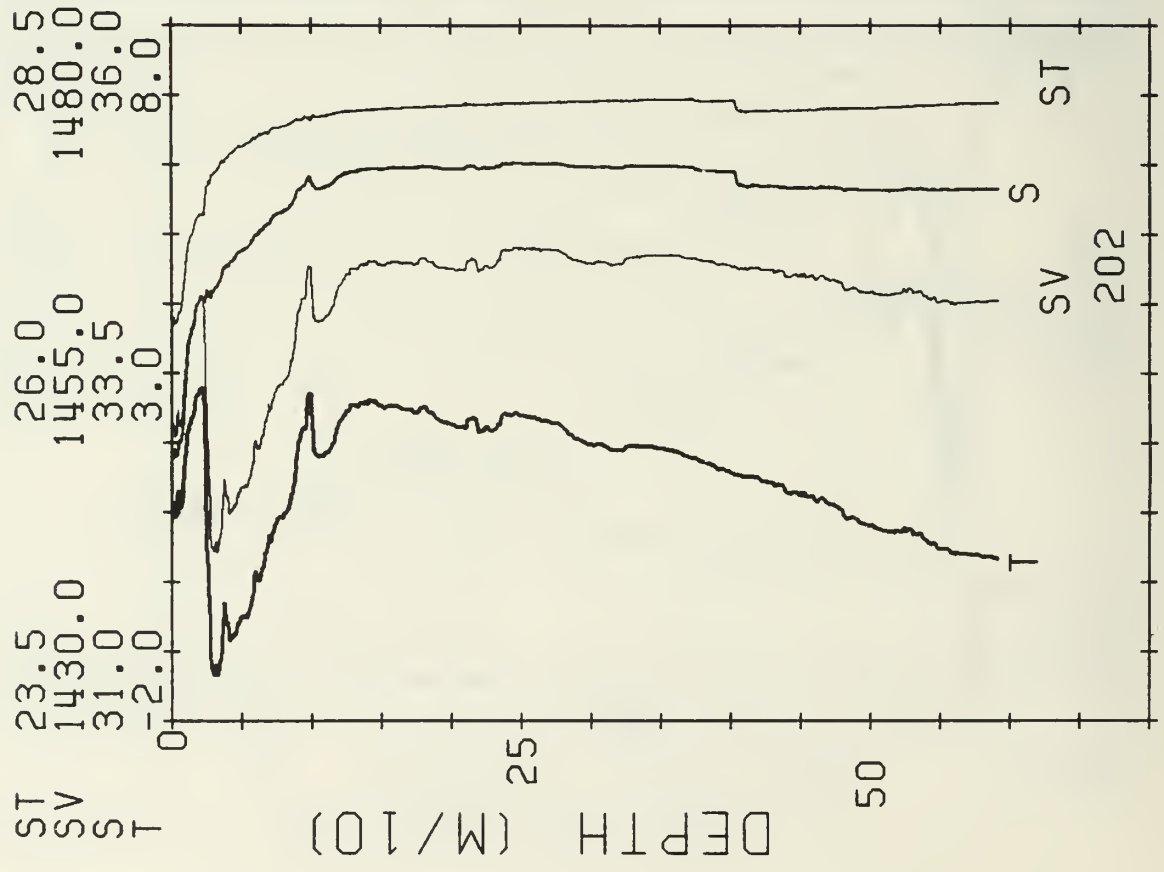
MIZLANT 84 CTD STATIONS



28.5 MG/CC
 1480.0 M/SEC
 36.0 P.P.T.
 8.0 DEG C

26.0
 1455.0
 33.5
 3.0

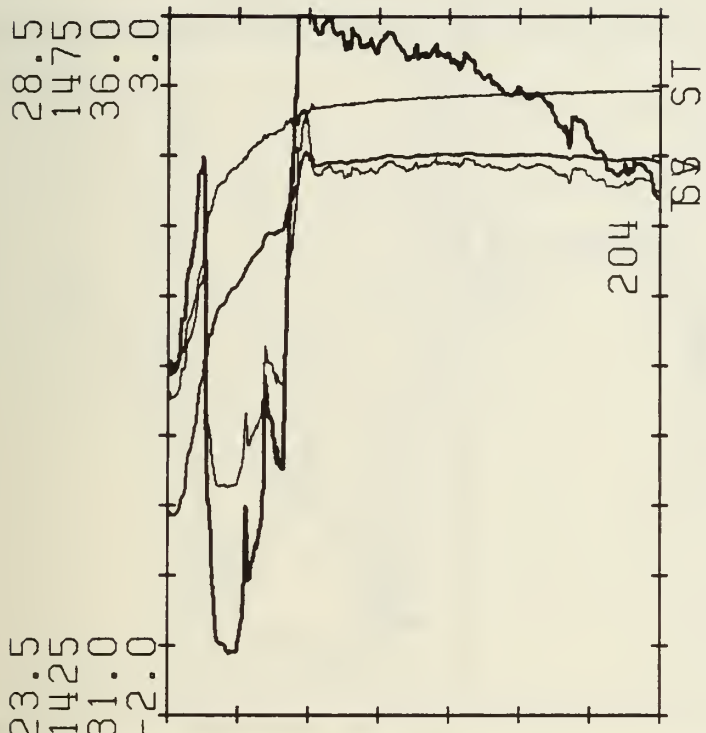
23.5
 1430.0
 31.0
 -2.0



MIZLANT 84 CTD STATIONS

MG/CC
M/SEC
P.P.T.
DEG C

MIZLANT84 C.T.D. STATIONS

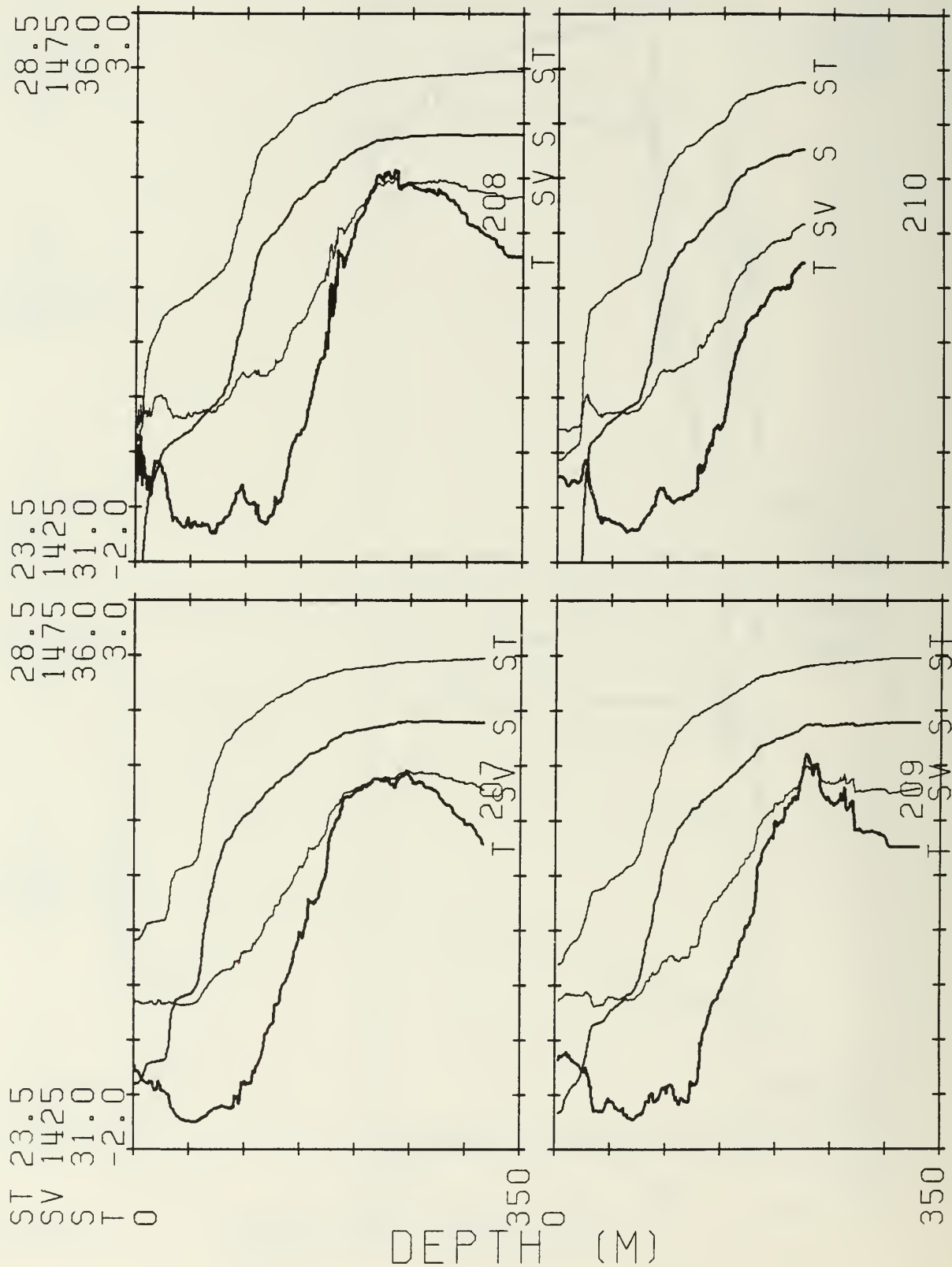


ST 23.5
SV 14.25
T 31.0
-2.0

DEPTH (M)

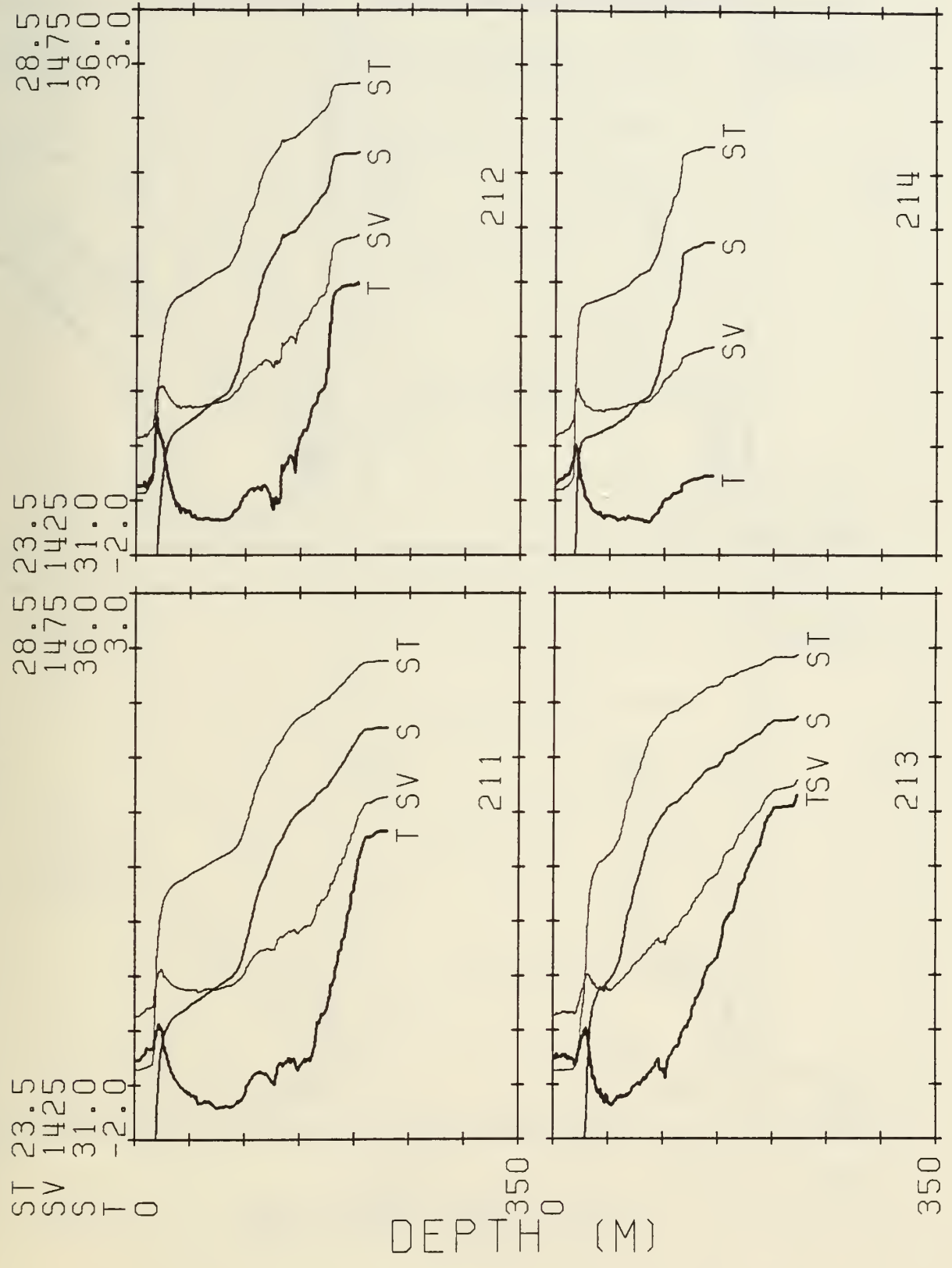
MG/CC
M/SEC
P.P.T.
DEG C

MIZLANT84 C.T.D. STATIONS



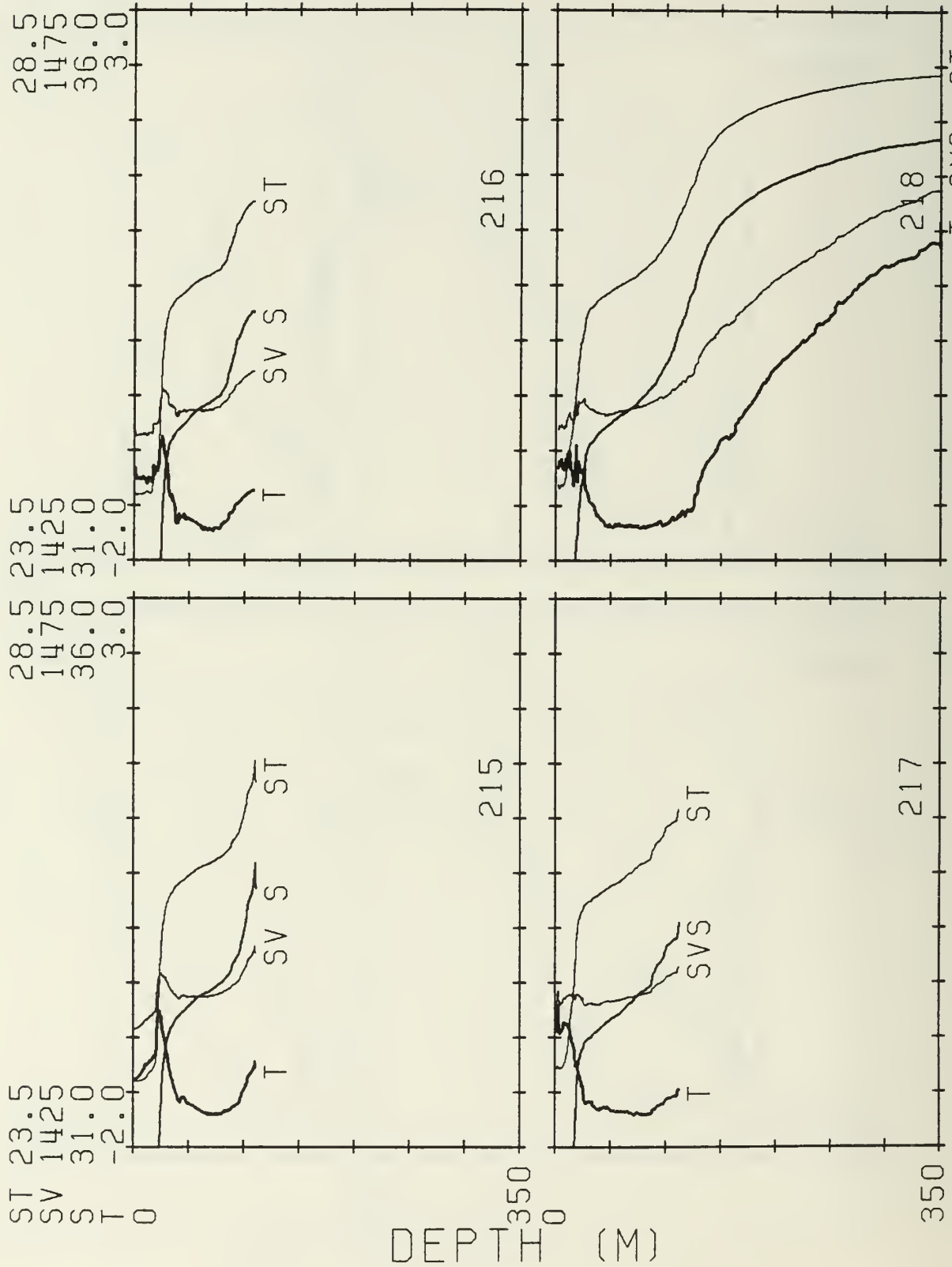
MG/CC
M/SEC
P.P.T.
DEG C

MIZLANT84 C.T.D. STATIONS



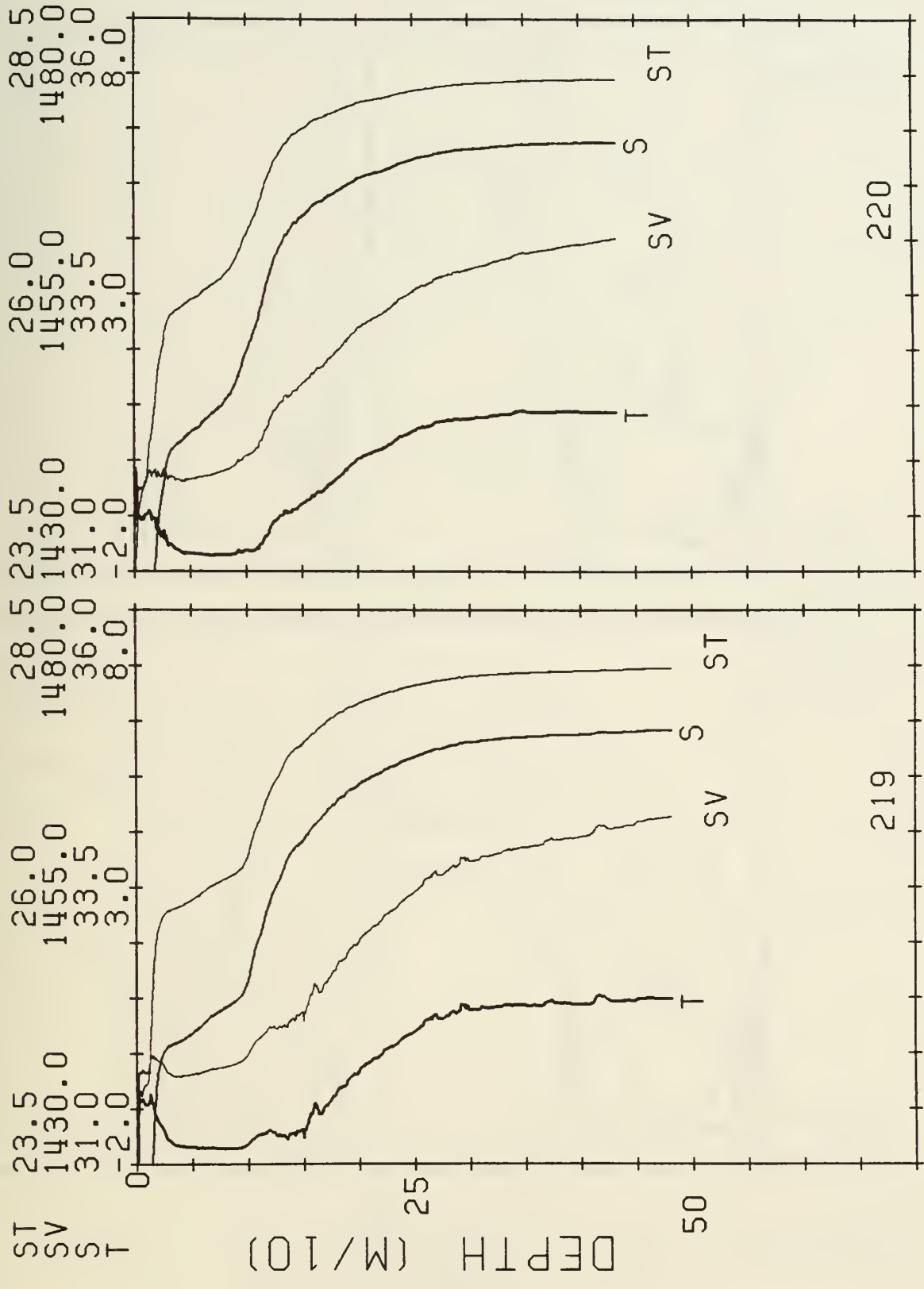
MG/CC
M/SEC
P.P.T.
DEC C

MIZLANT84 C.T.D. STATIONS



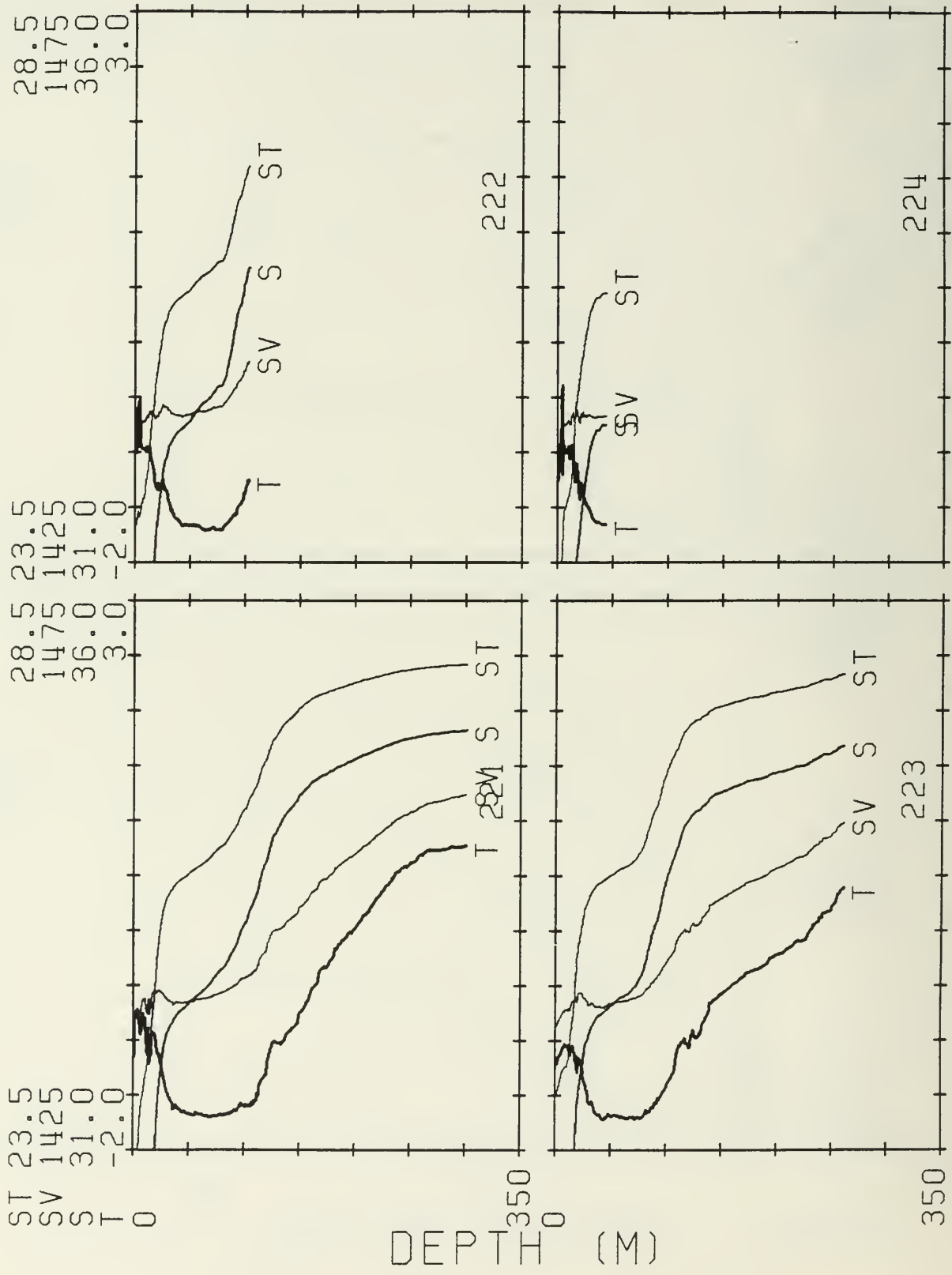
MG/CC
M/SEC
P.P.T.
DEG C

MIZLANT 84 CTD STATIONS



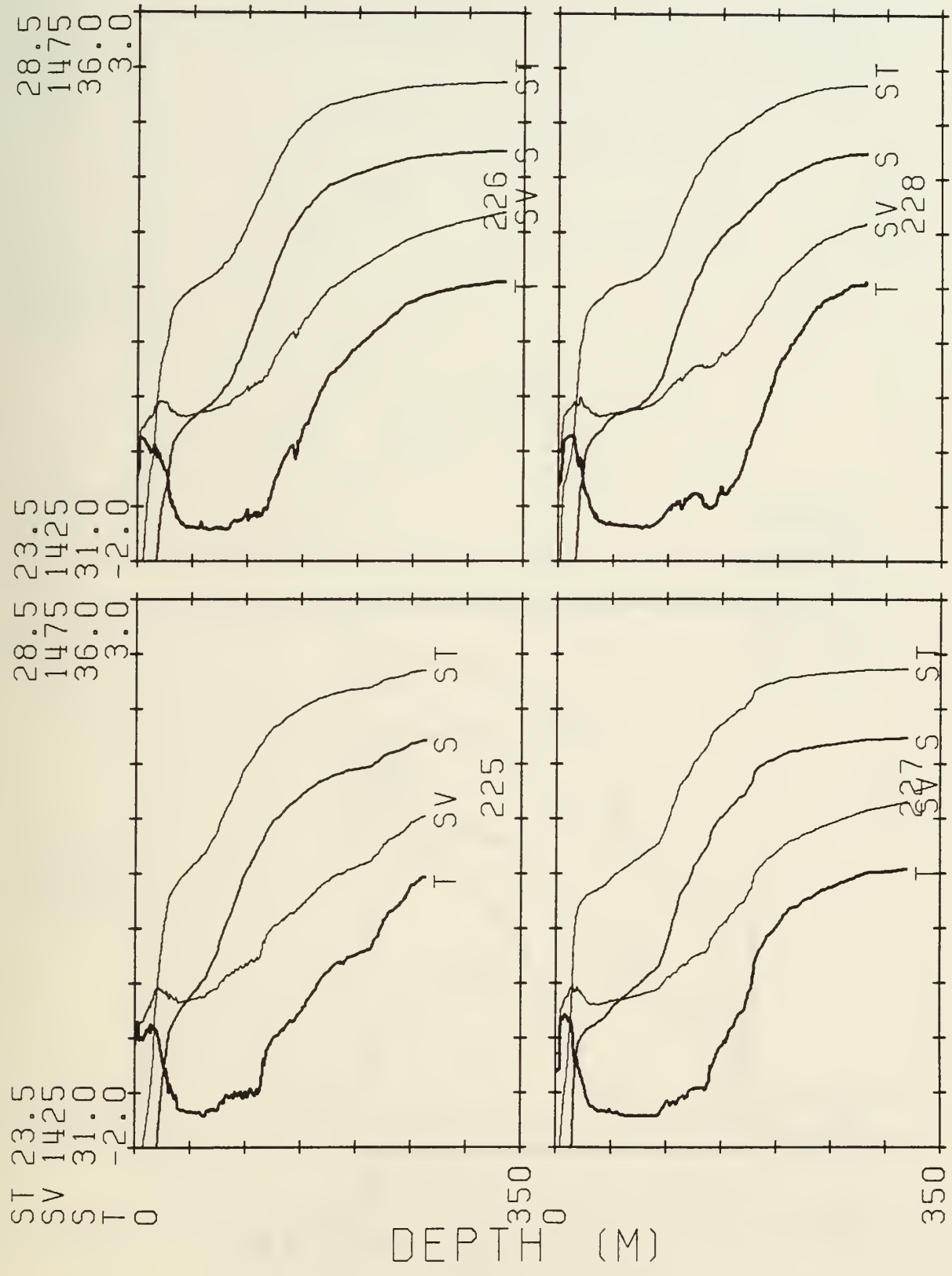
MG/CC
M/SEC
P.P.T.
DEG C

MIZLANT84 C.T.D. STATIONS



MG/CC
M/SEC
P.P.T.
DEG C

MIZLANT84 C.T.D. STATIONS

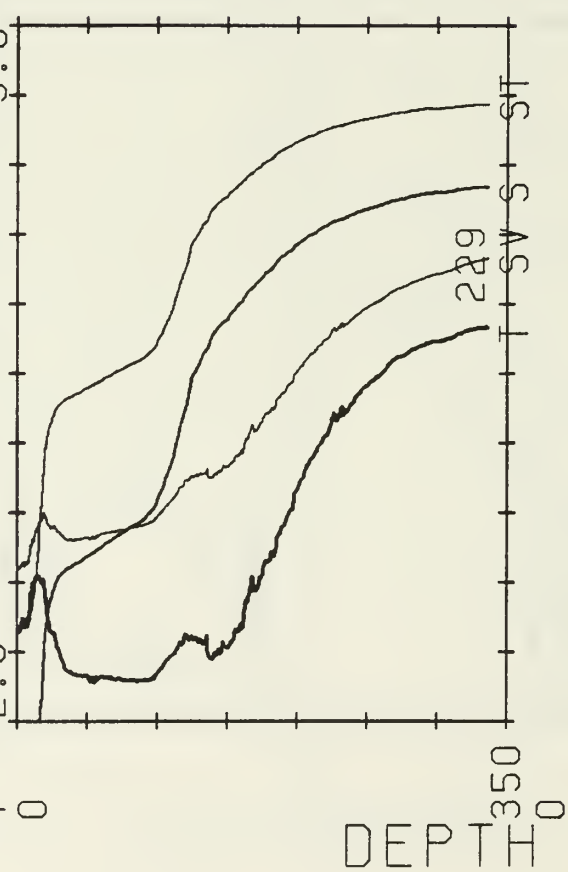


28.5
14.75
36.0
3.0

28.5
14.75
36.0
3.0

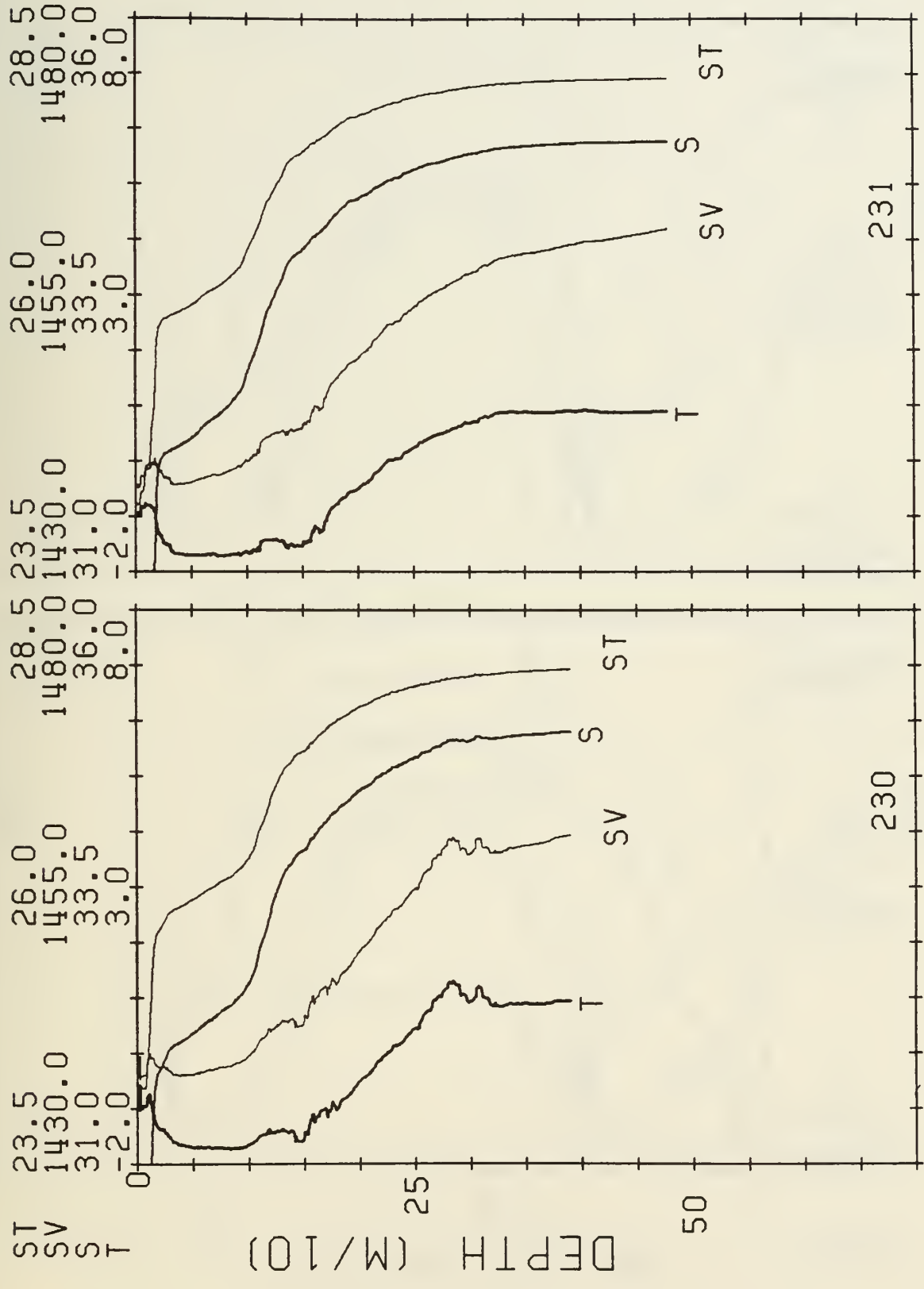
ST 23.5
SV 14.25
S 31.0
T 0

MIZLANT84 C.T.D. STATIONS



MG/CC
M/SEC
P.P.T.
DEG C

MIZLANT 84 CTD STATIONS

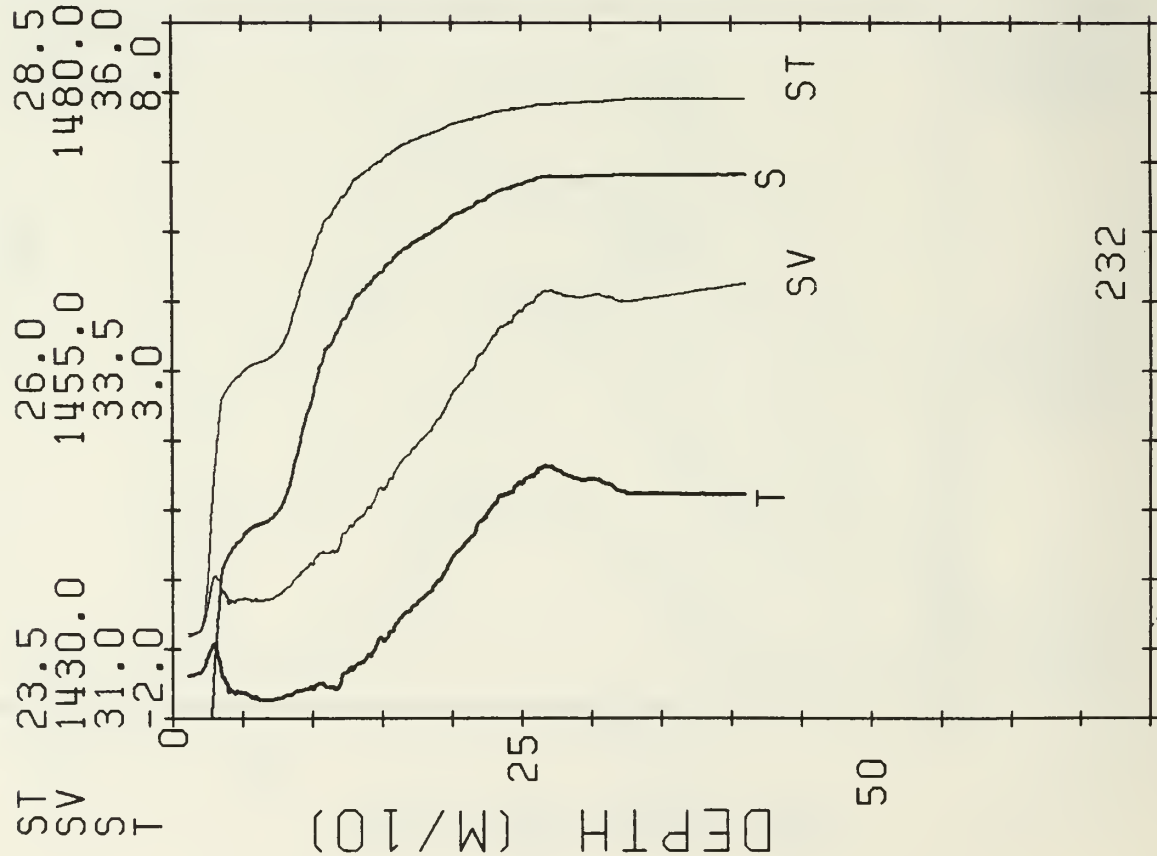


28.5 MG/CC
1480.0 M/SEC
36.0 P.P.T.
8.0 DEG C

MIZLANT 84 CTD STATIONS

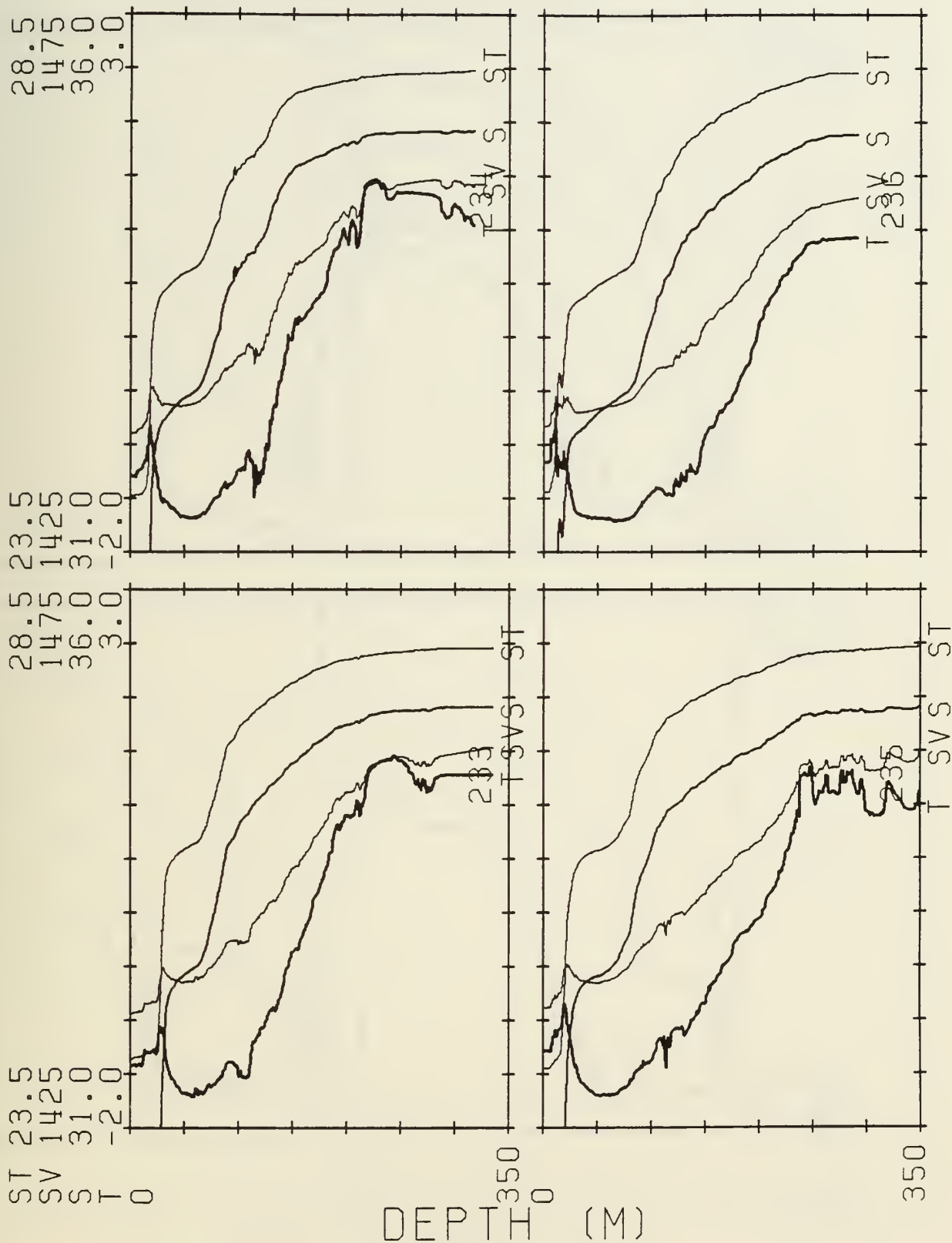
26.0
1455.0
33.5
3.0

23.5 23.5
1430.0 1430.0
31.0 31.0
-2.0 -2.0



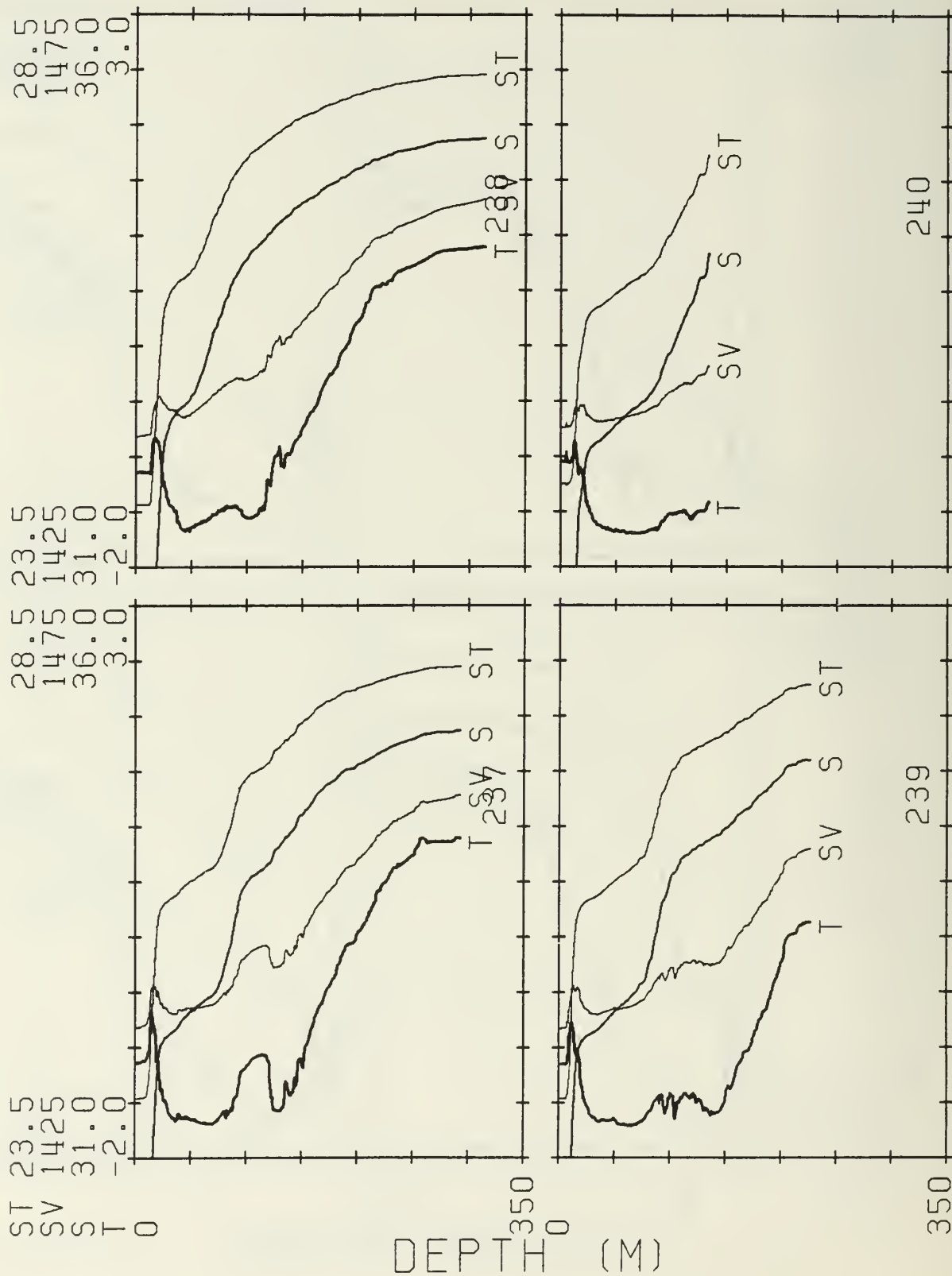
MG/CC
M/SEC
P.P.T.
DEG C

MIZLANT84 C.T.D. STATIONS



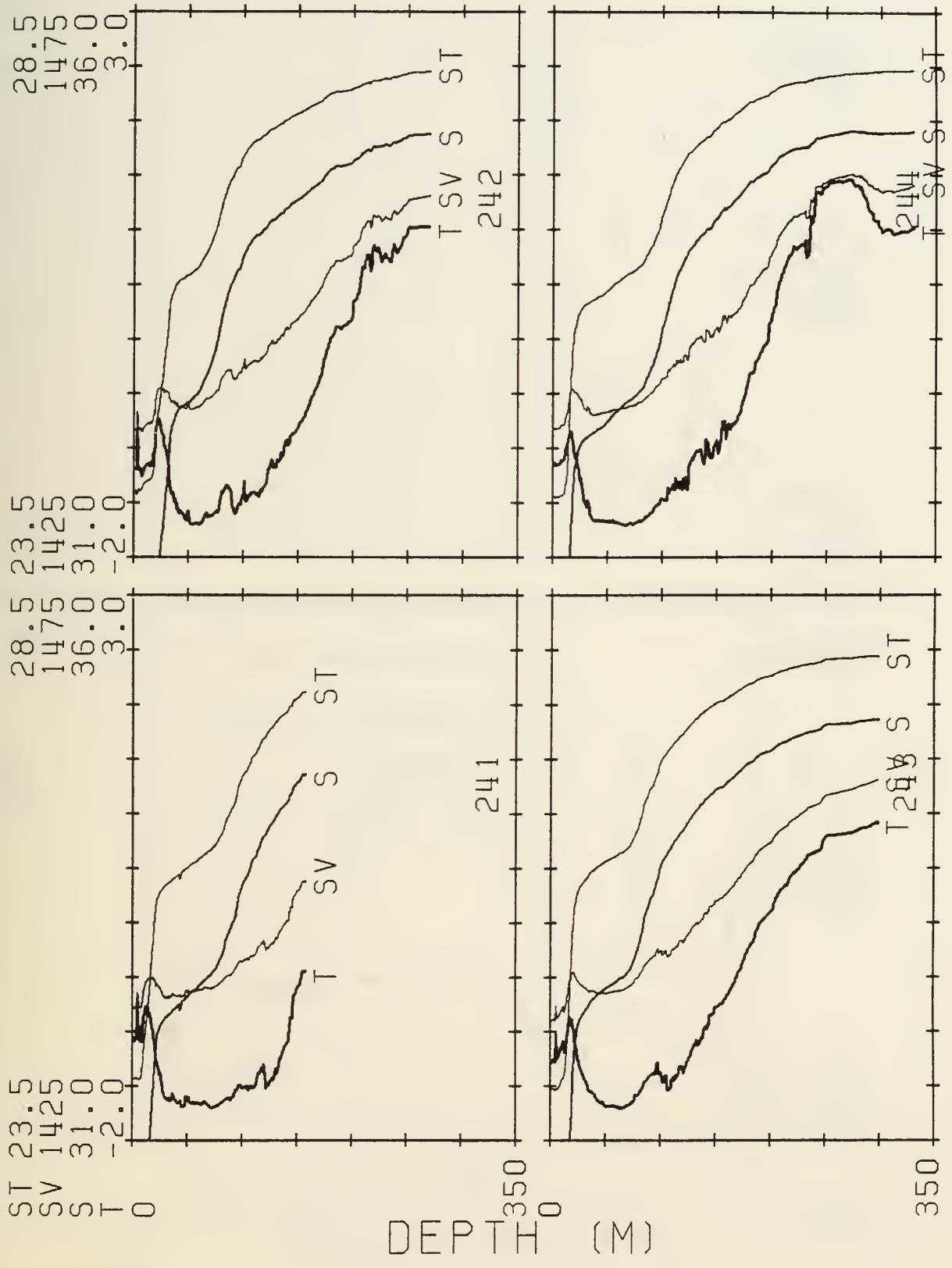
MG/CC
M/SEC
P.P.T.
DEG C

MIZLANT84 C.T.D. STATIONS



MG/CC
M/SEC
P.P.T.
DEG C

MIZLANT84 C.T.D. STATIONS



MG/CC
M/SEC
P.P.T.
DEG C

28.5
1480.0
36.0
8.0

26.0
1455.0
33.5
3.0

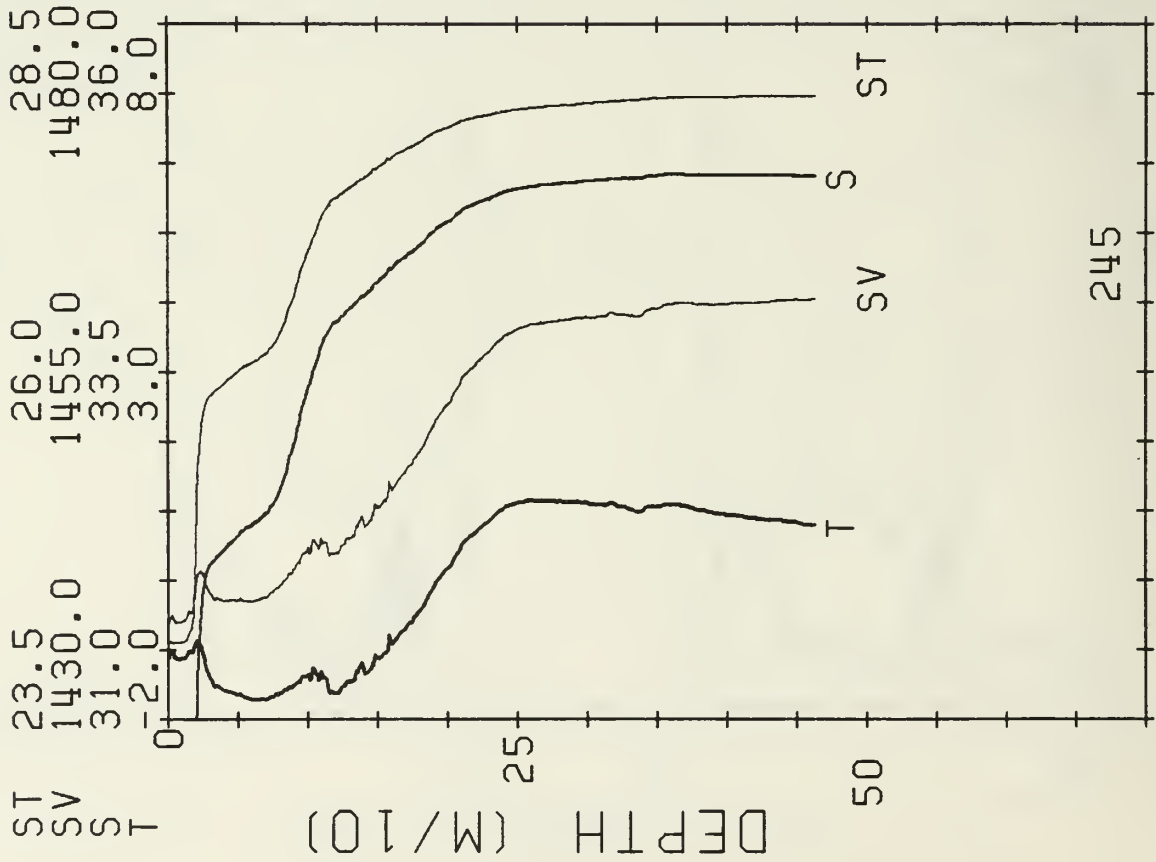
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-2.0

28.5
1480.0
36.0
8.0

26.0
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33.5
3.0

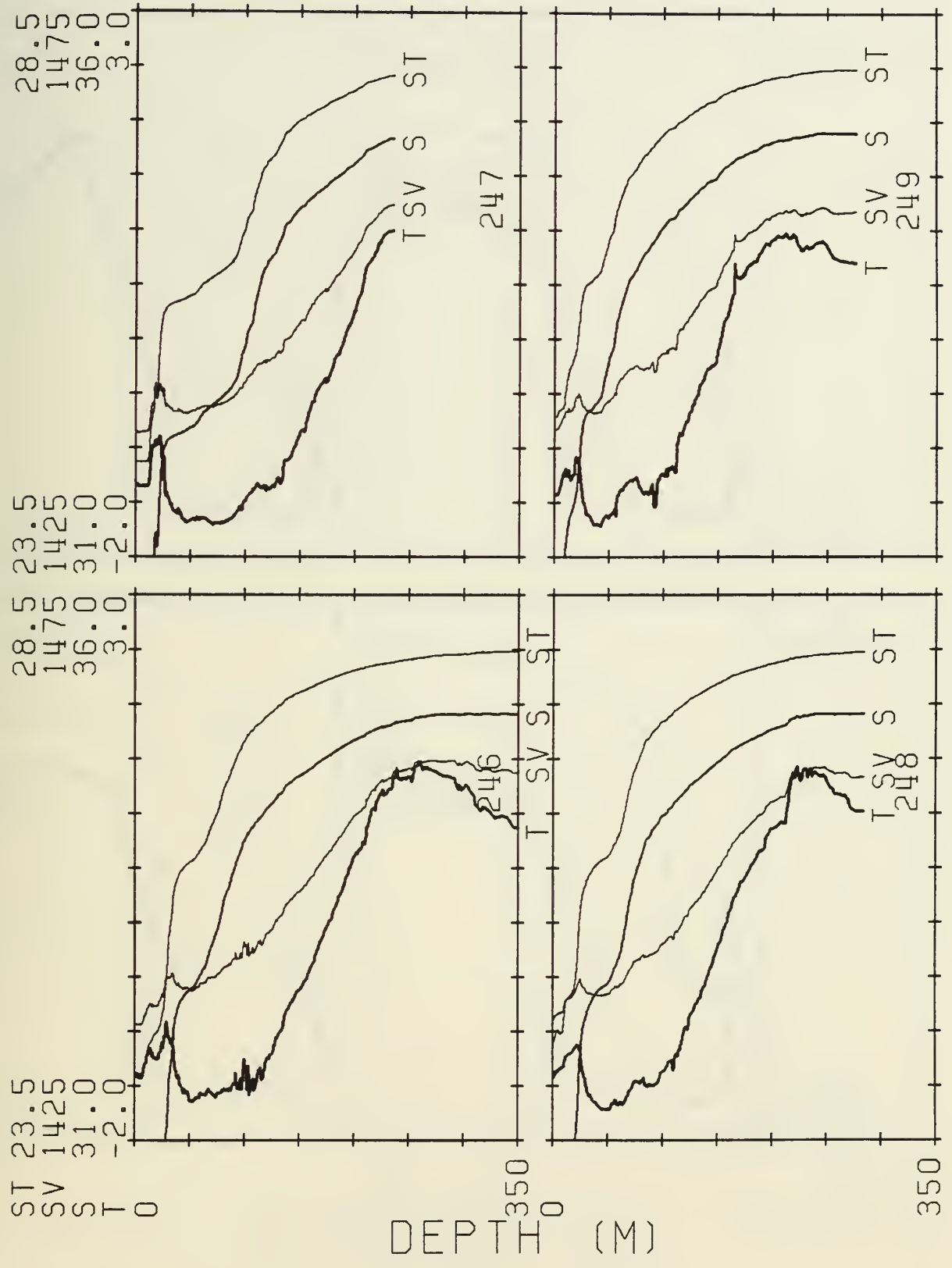
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-2.0

MIZLANT 84 CTD STATIONS



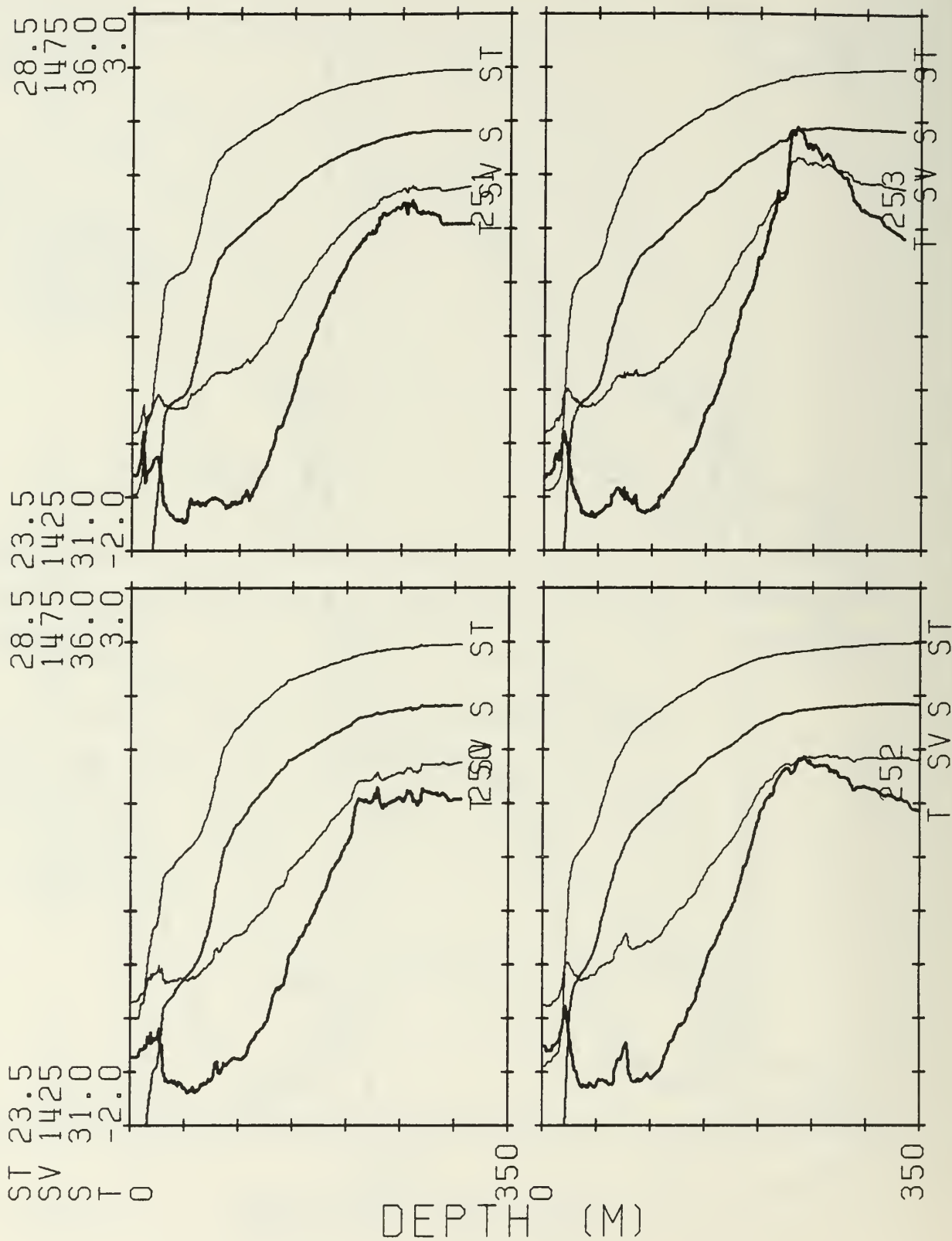
MG/CC
M/SEC
P.P.T.
DEG C

MIZLANT84 C.T.D. STATIONS



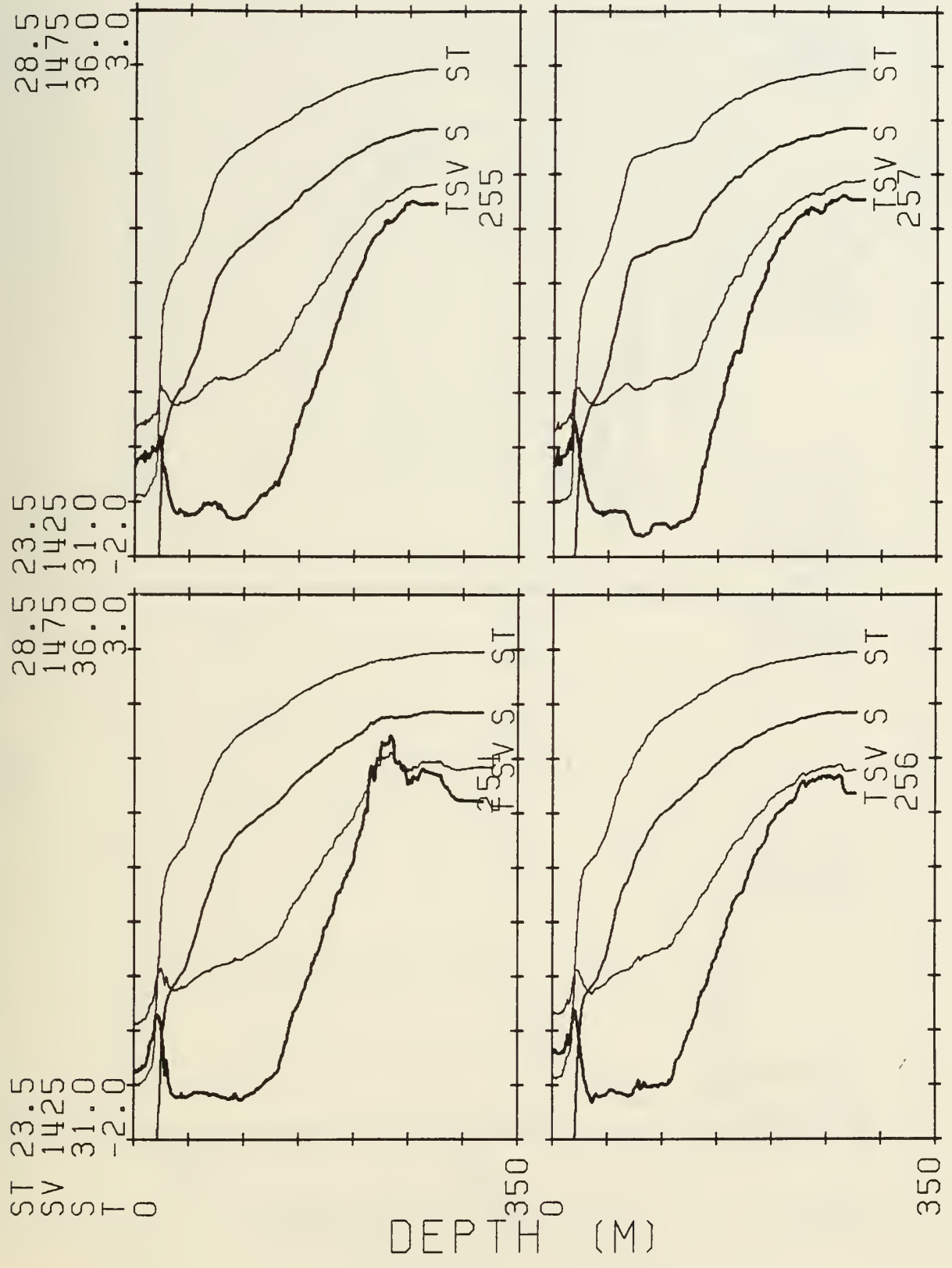
MG/CC
M/SEC
P.P.T.
DEG C

MIZLANT84 C.T.D. STATIONS



MG/CC
M/SEC
P.P.T.
DEG C

MIZLANT84 C.T.D. STATIONS



ST
SV
S
T

23.5
1430.0
31.0
-2.0

26.0
1455.0
33.5
3.0

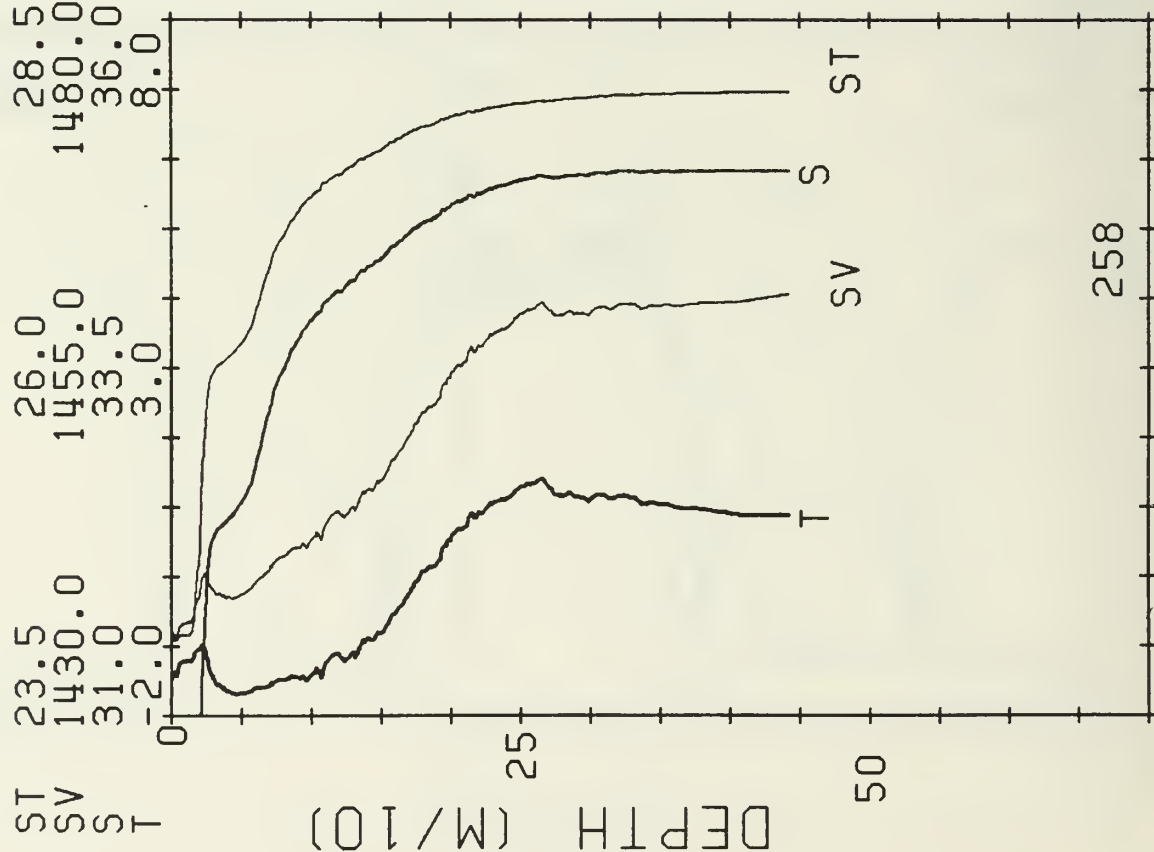
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36.0
-2.0

28.5
1480.0
36.0
8.0

26.0
1455.0
33.5
3.0

23.5
1430.0
31.0
-2.0

MIZLANT 84 CTD STATIONS



23.5
1430.0
31.0
-2.0

26.0
1455.0
33.5
3.0

28.5
1480.0
36.0
-2.0

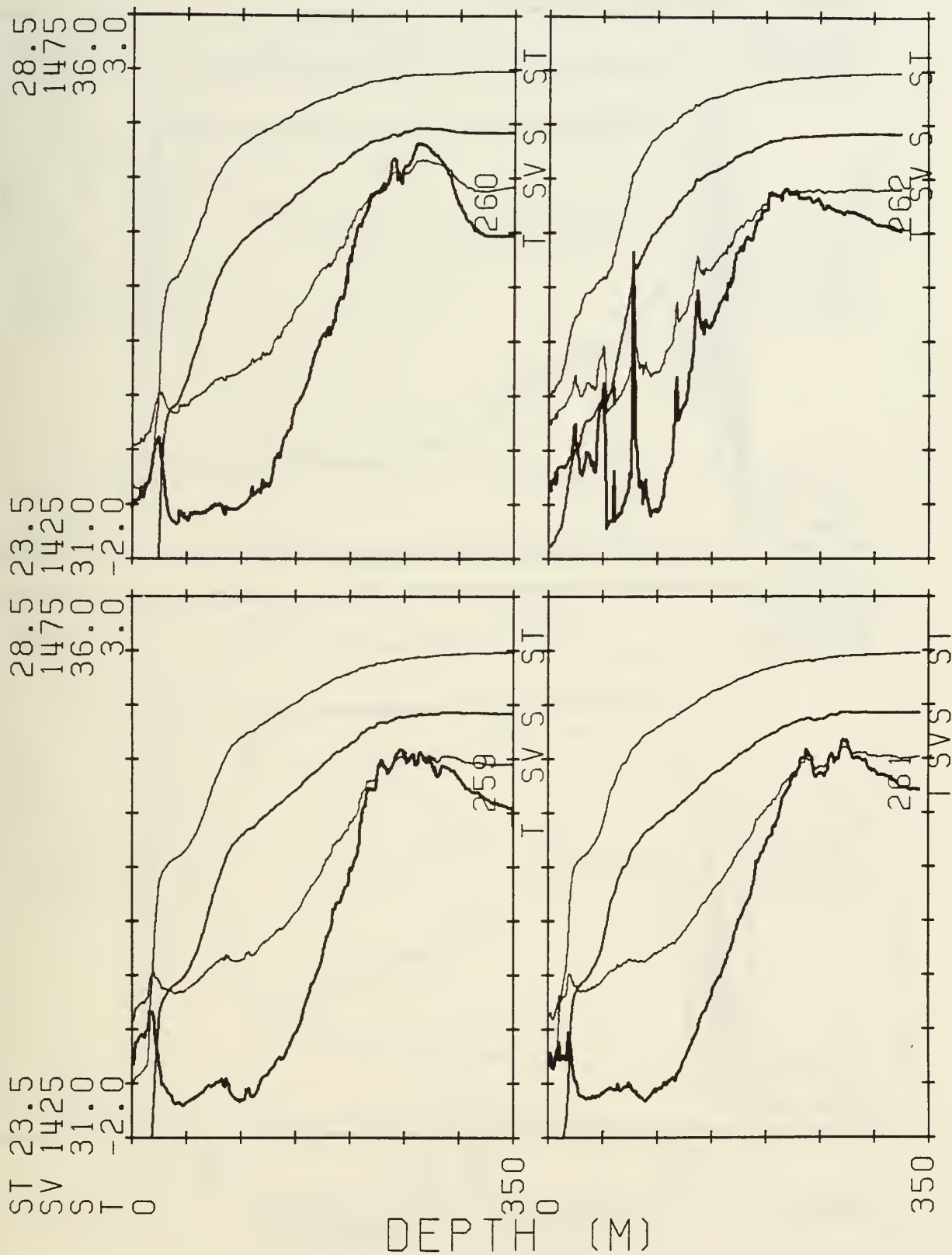
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8.0

26.0
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33.5
3.0

23.5
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31.0
-2.0

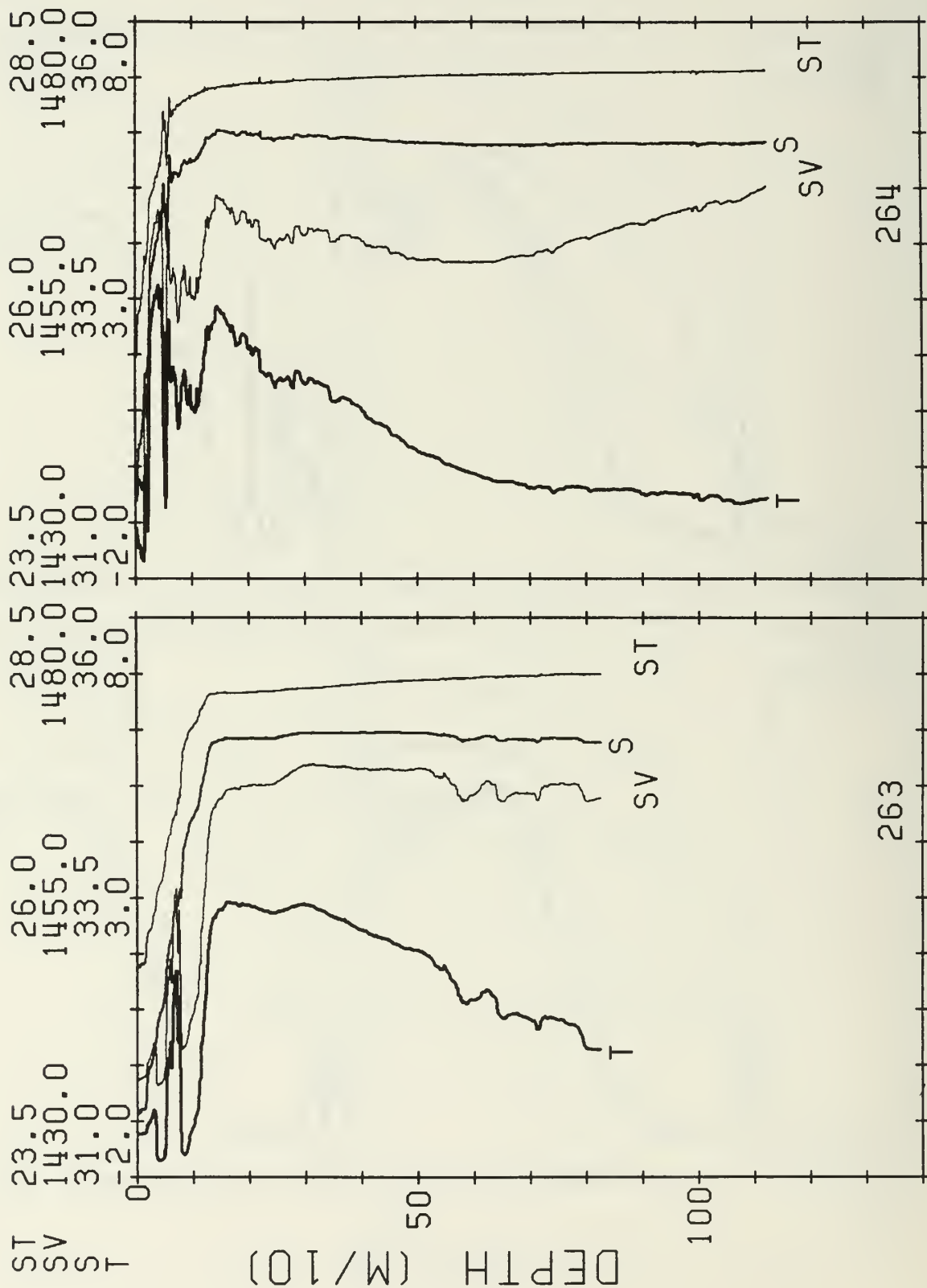
MG/CC
M/SEC
P.P.T.
DEG C

MIZLANT84 C.T.D. STATIONS



MG/CC
M/SEC
P.P.T.
DEG.C

MIZLANT 84 CTD STATIONS



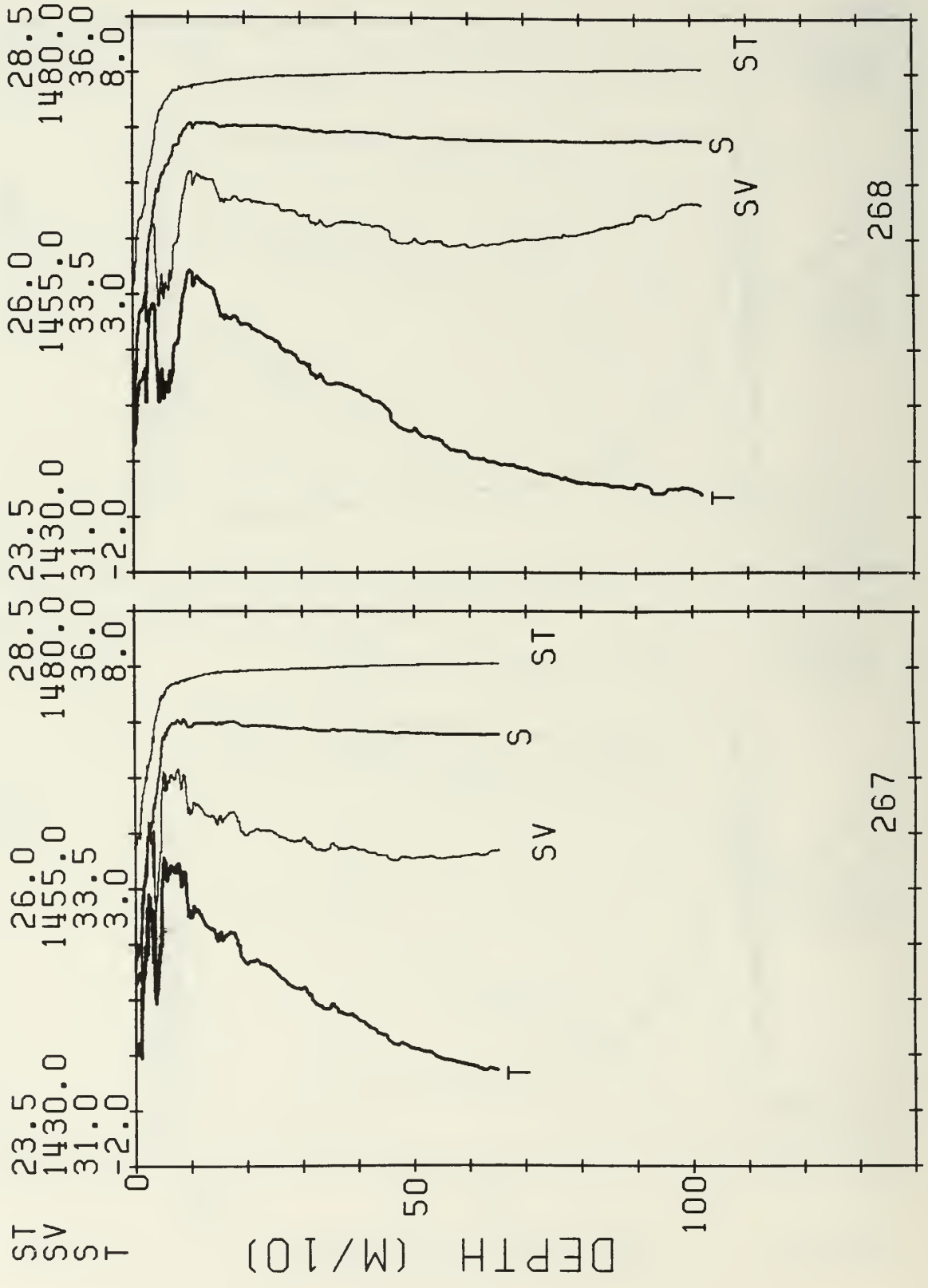
MG/CC
M/SEC
P.P.T.
DEG C

MIZLANT 84 CTD STATIONS



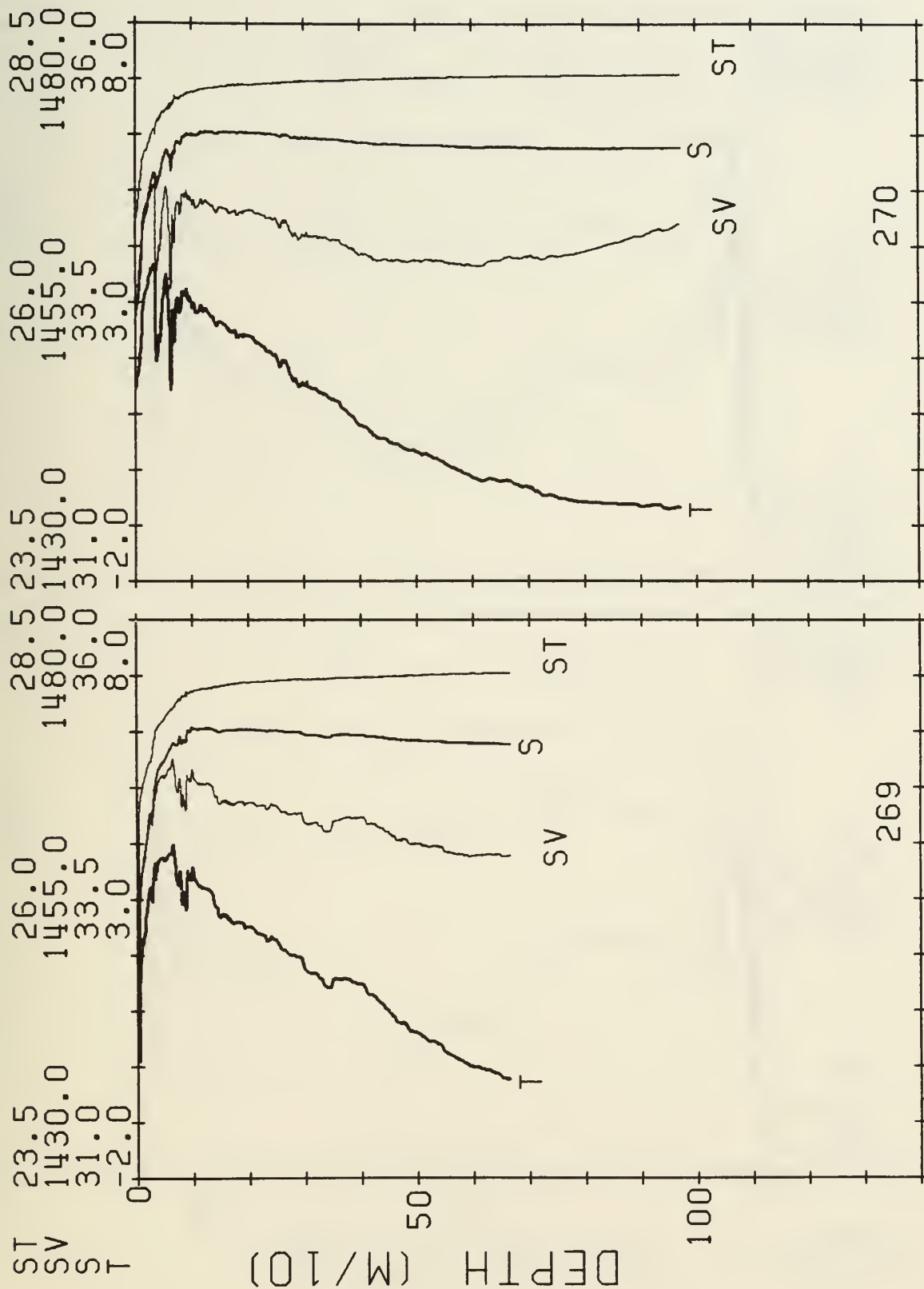
MG/CC
M/SEC
P.P.T.
DEG C

MIZLANT 84 CTD STATIONS



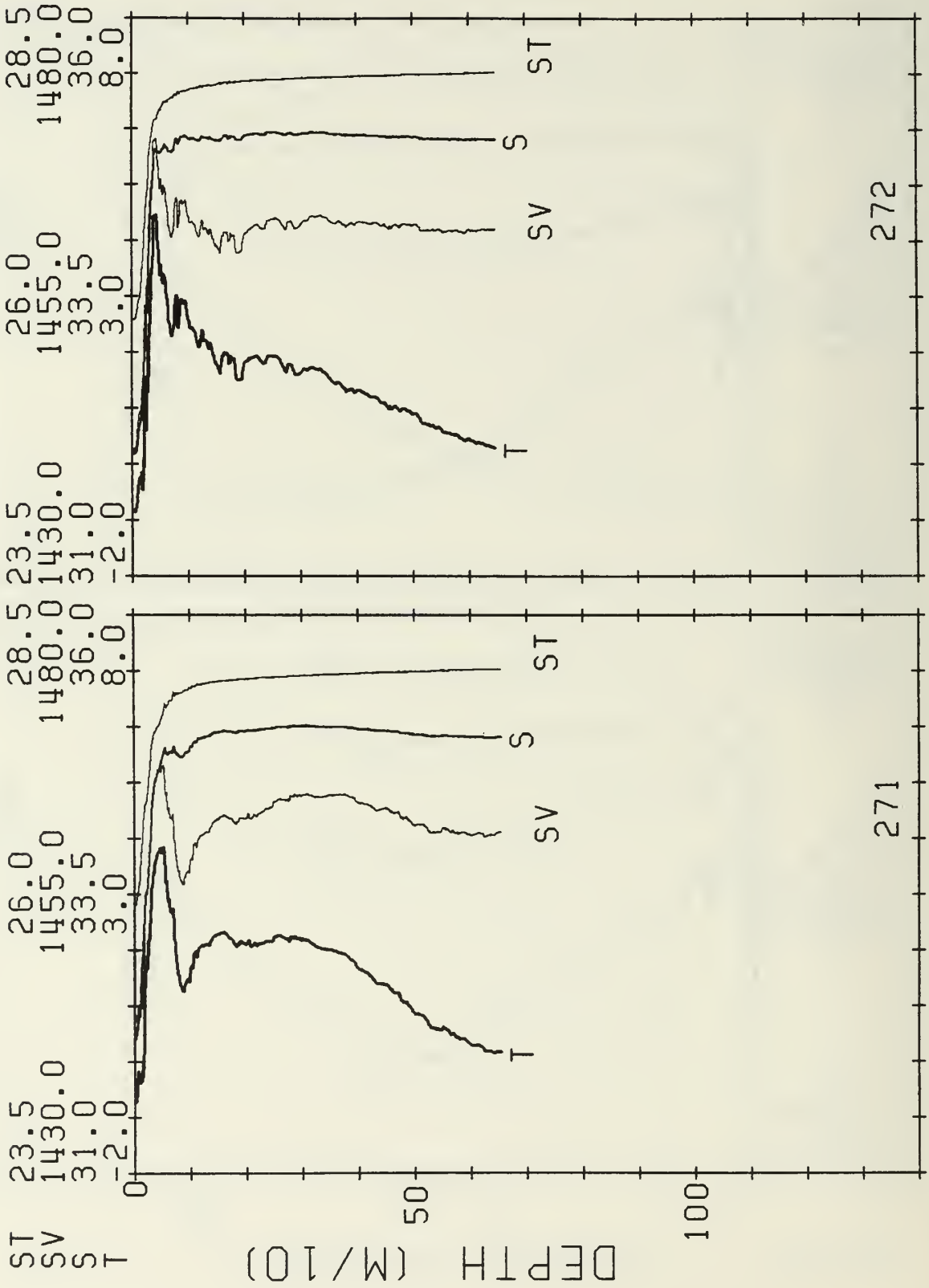
MG/CC
M/SEC
P.P.T.
DEG C

MIZLANT 84 CTD STATIONS



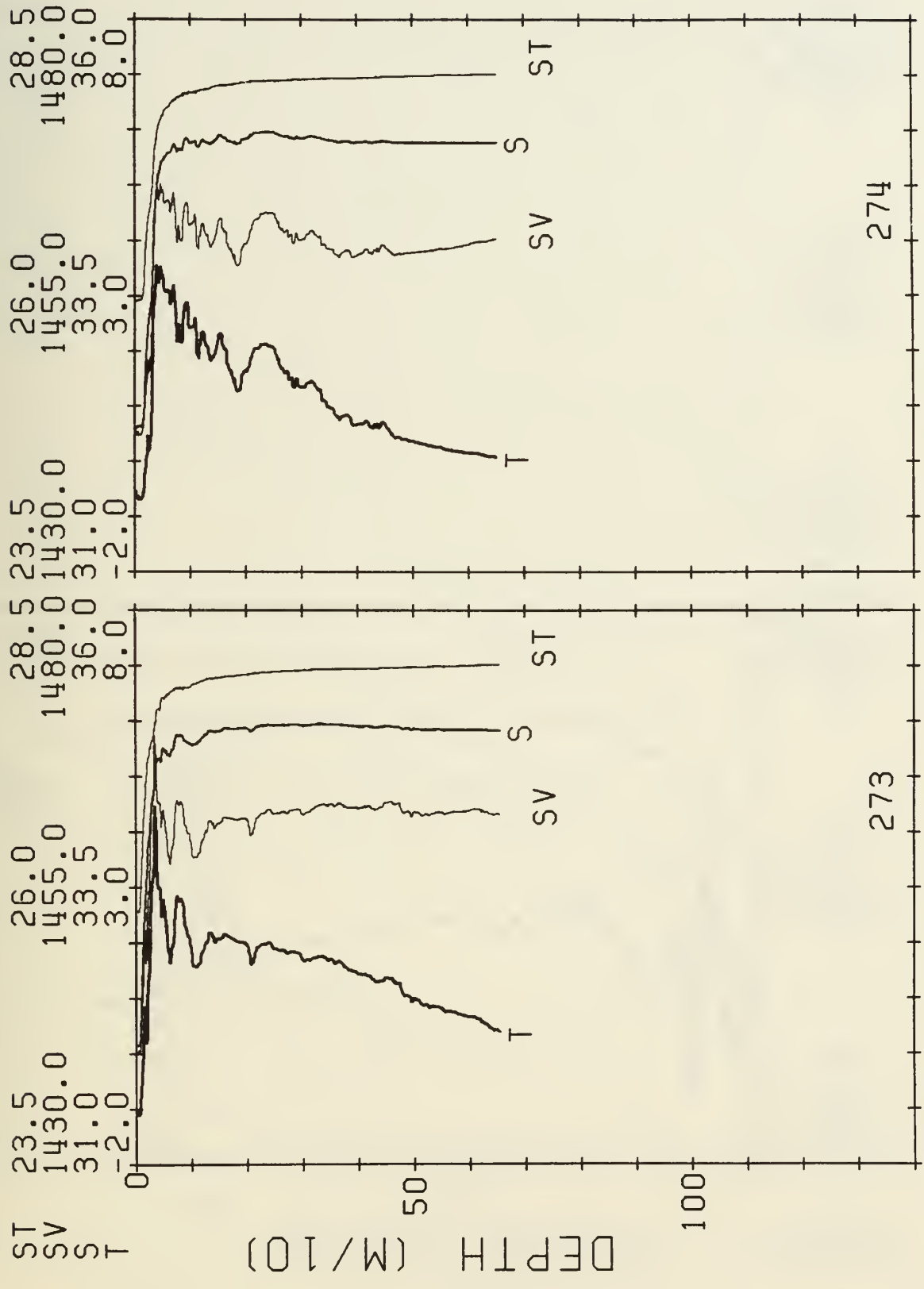
MG/CC
M/SEC
P.P.T.
DEG C

MIZLANT 84 CTD STATIONS



MG/CC
M/SEC
P.P.T.
DEG C

MIZLANT 84 CTD STATIONS

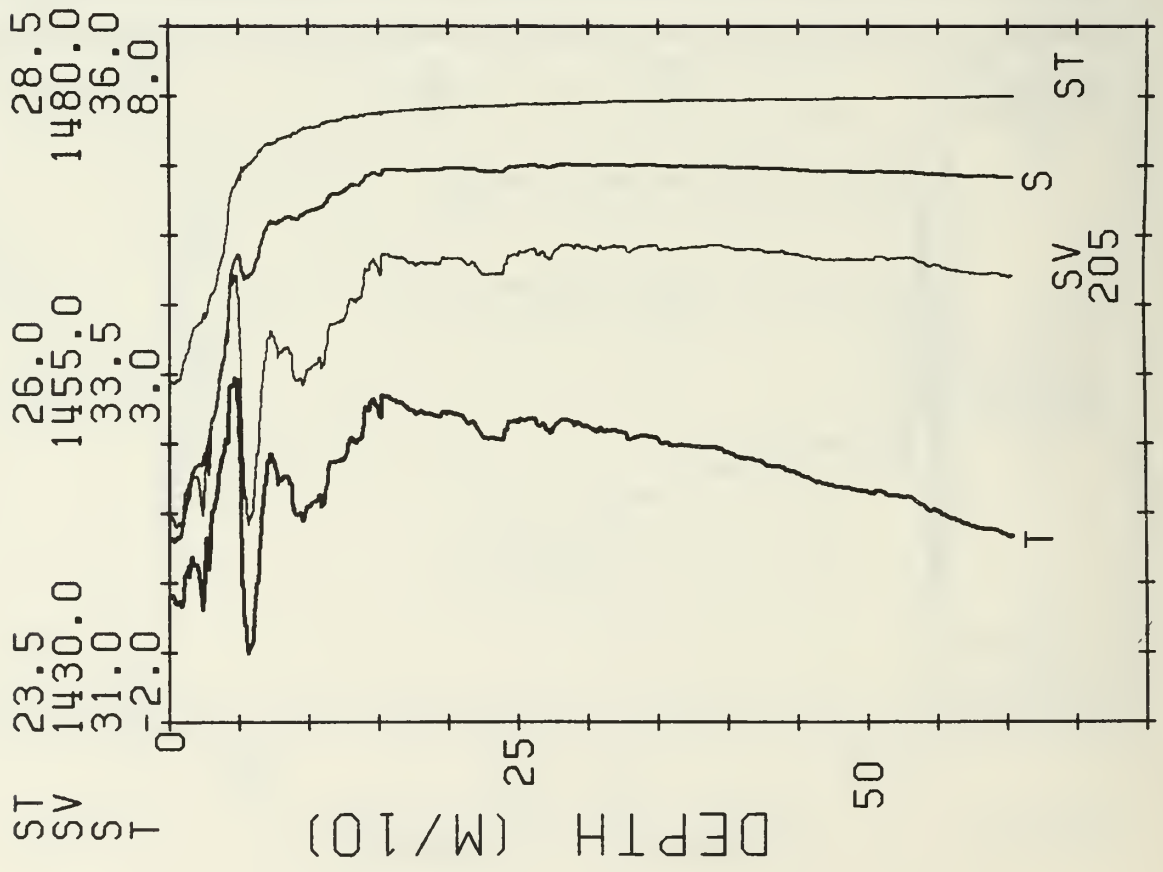


28.5 MG/CC
 1480.0 M/SEC
 36.0 P.P.T.
 8.0 DEG C

MIZLANT 84 CTD STATIONS

26.0
 1455.0
 33.5
 3.0

23.5
 1430.0
 31.0
 -2.0



ST
SV
S
T

23.5
1430.0
31.0
-2.0

26.0
1455.0
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3.0

28.5
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8.0

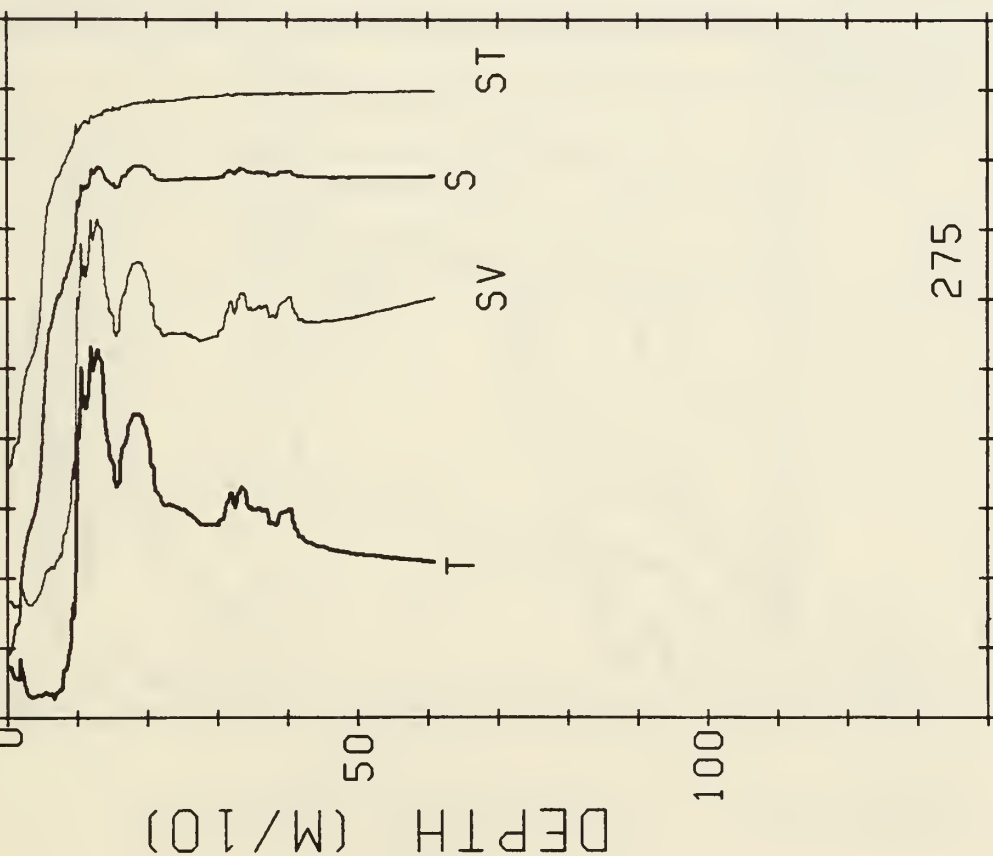
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33.5
3.0

28.5
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8.0

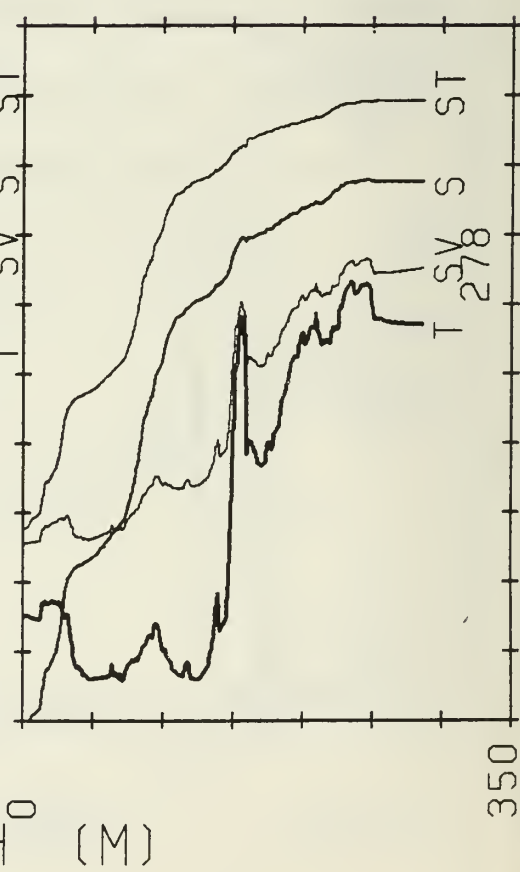
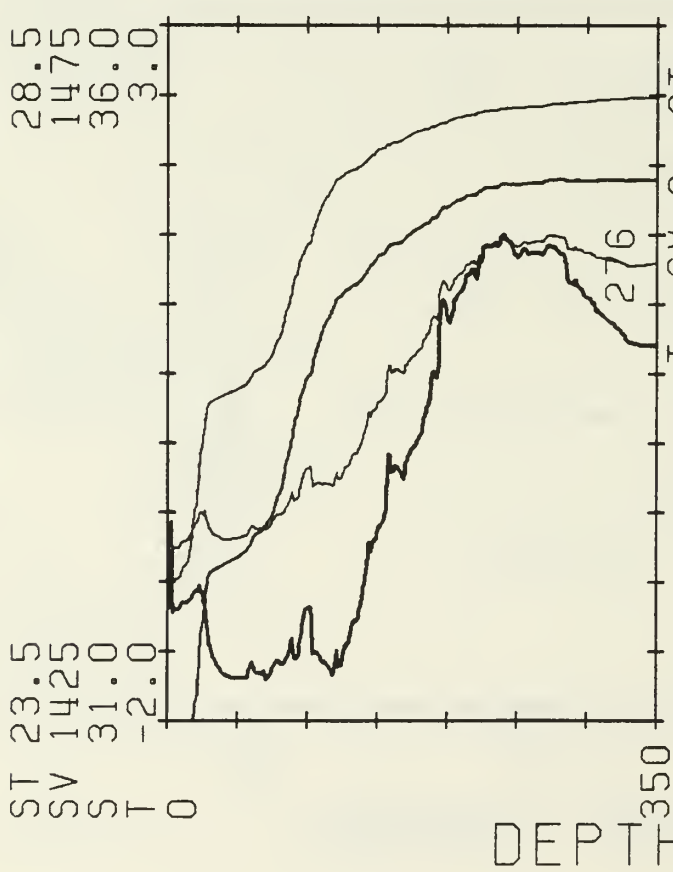
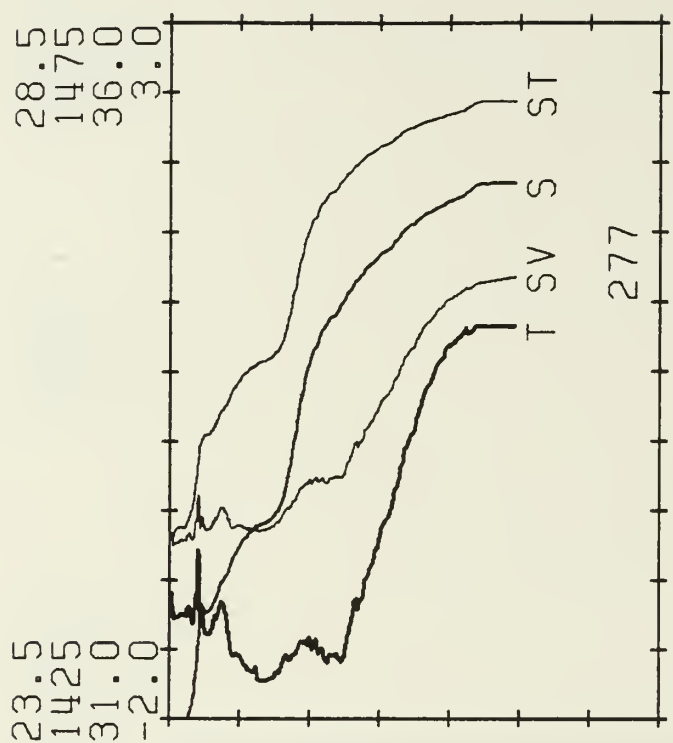
28.5
1480.0
36.0
8.0

MIZLANT 84 CTD STATIONS



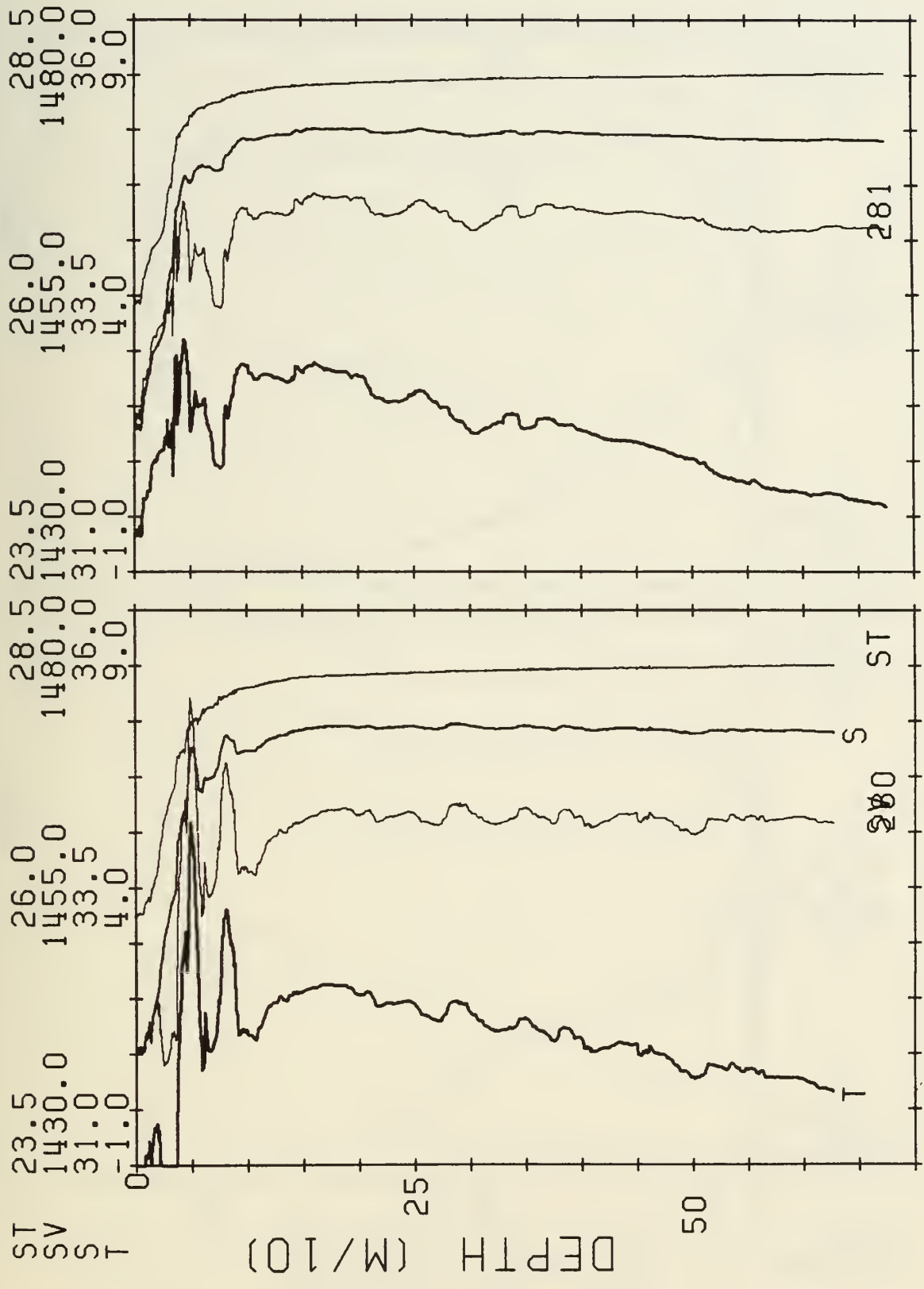
MG/CC
M/SEC
P.P.T.
DEG C

MIZLANT84 C.T.D. STATIONS



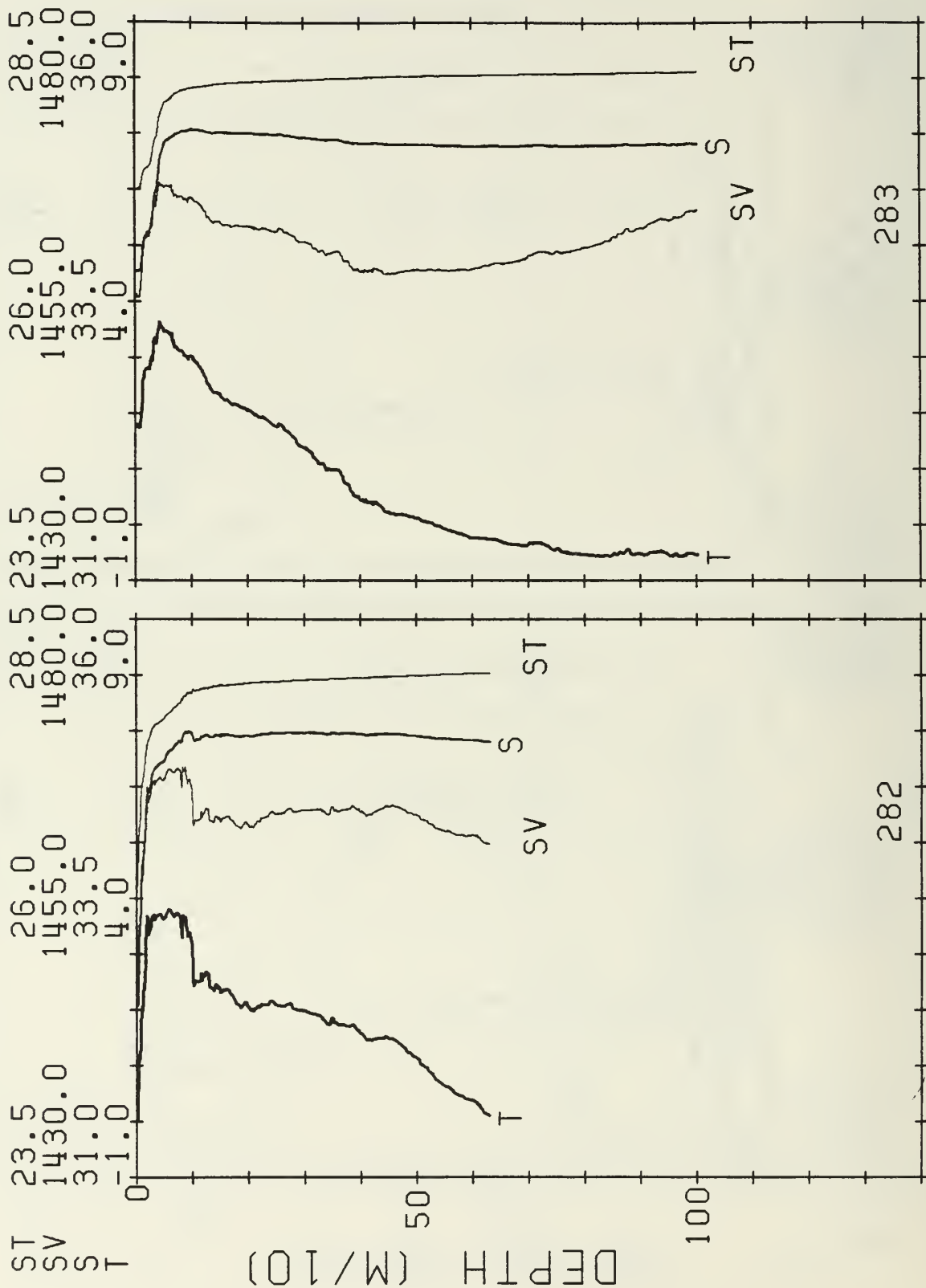
MG/CC
M/SEC
P.P.T.
DEG C

MIZLANT 84 CTD STATIONS



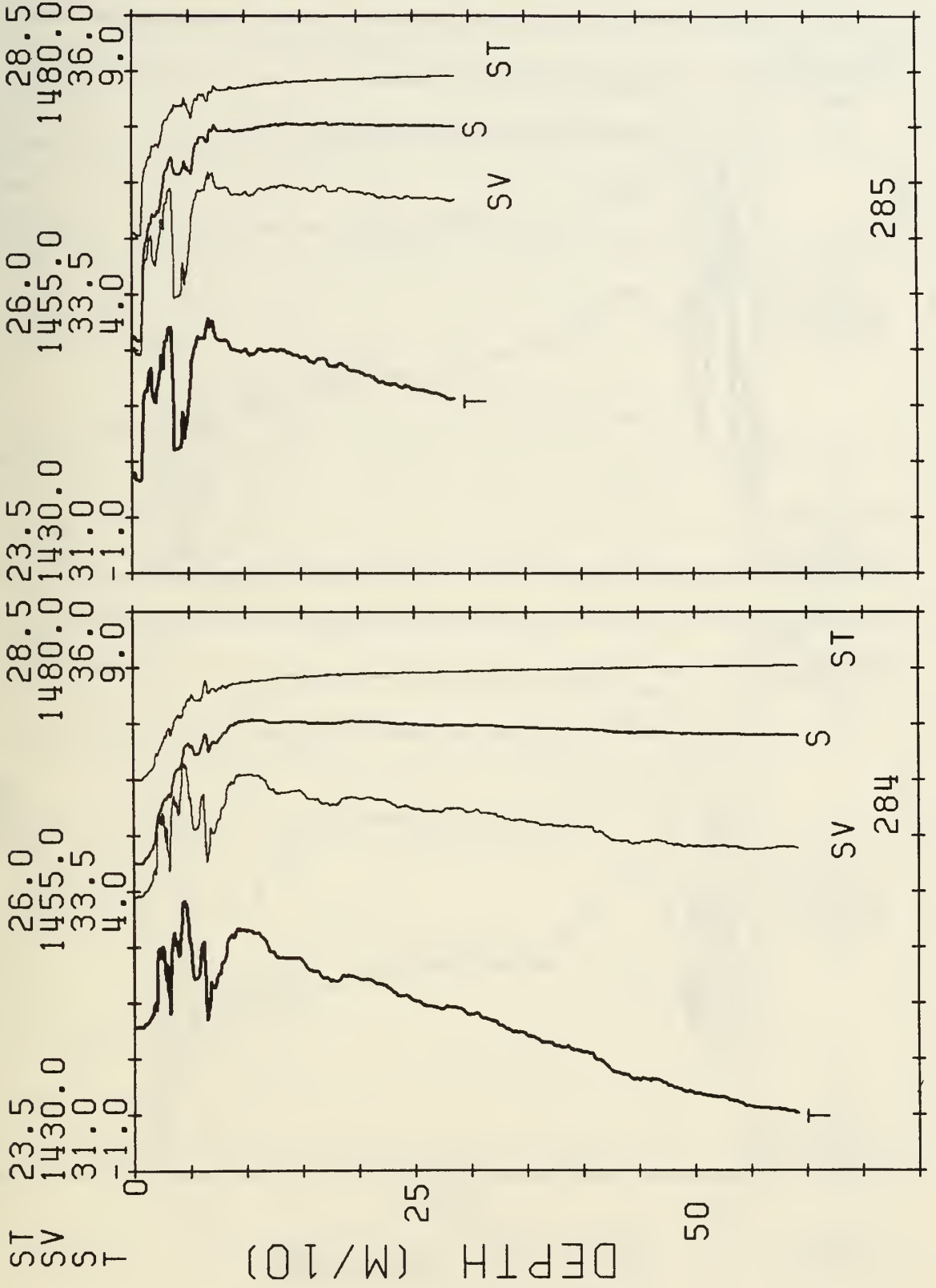
MG/CC
M/SEC
P.P.T.
DEG C

MIZLANT 84 CTD STATIONS



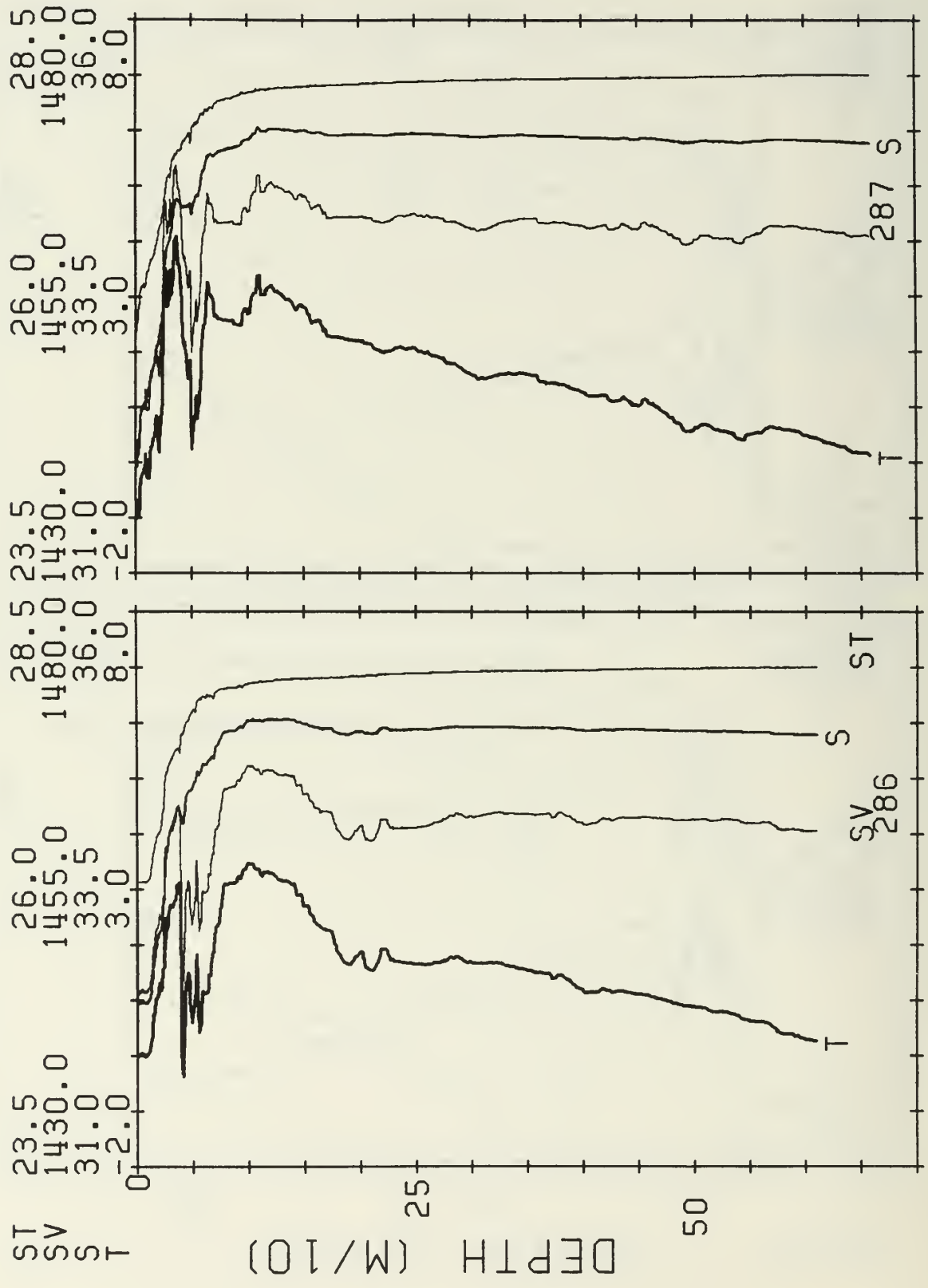
MIZLANT 84 CTD STATIONS

MG/CC
M/SEC
P.P.T.
DEG C



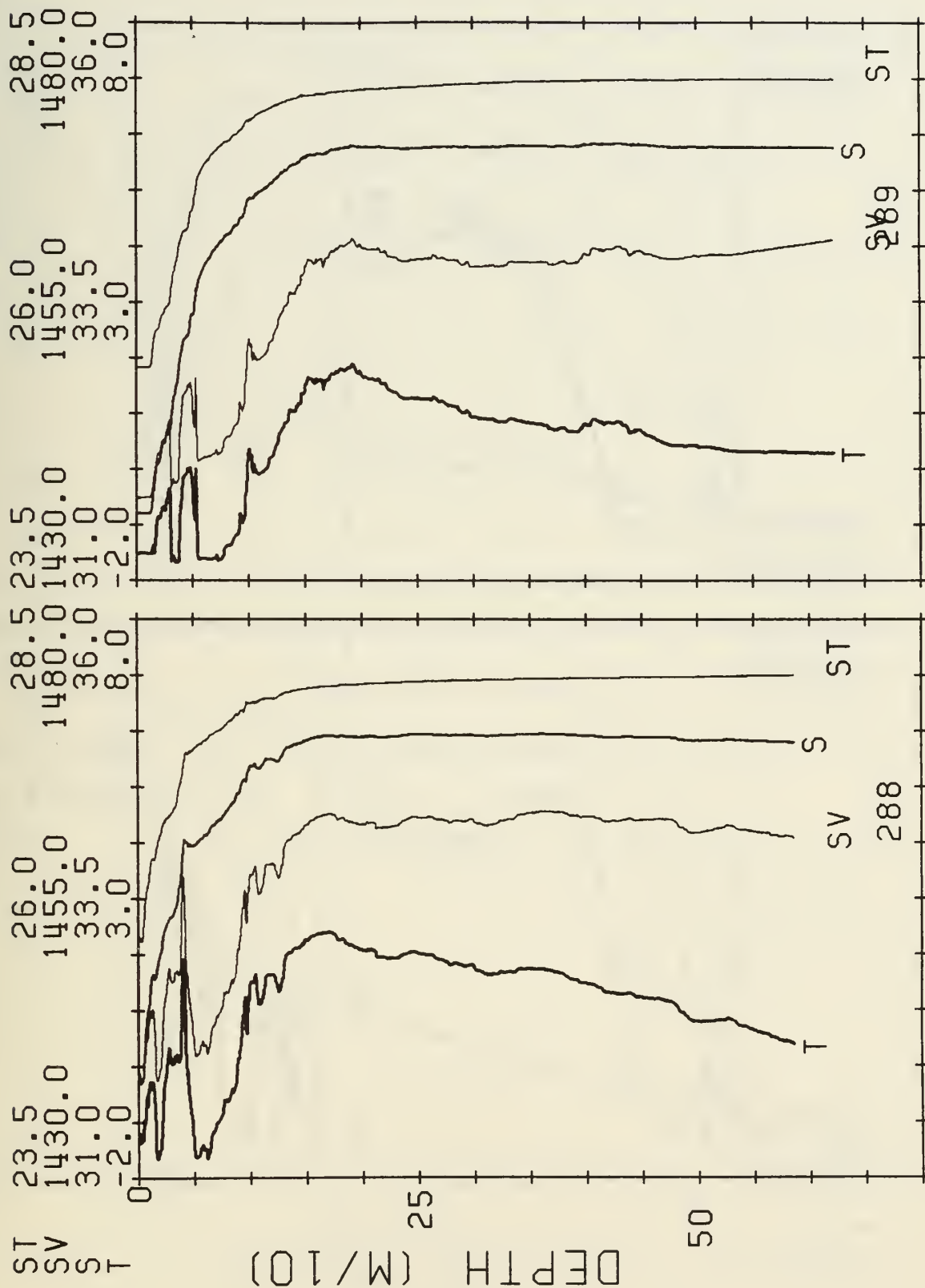
MG/CC
 M/SEC
 P.P.T.
 DEG C

MIZLANT 84 CTD STATIONS



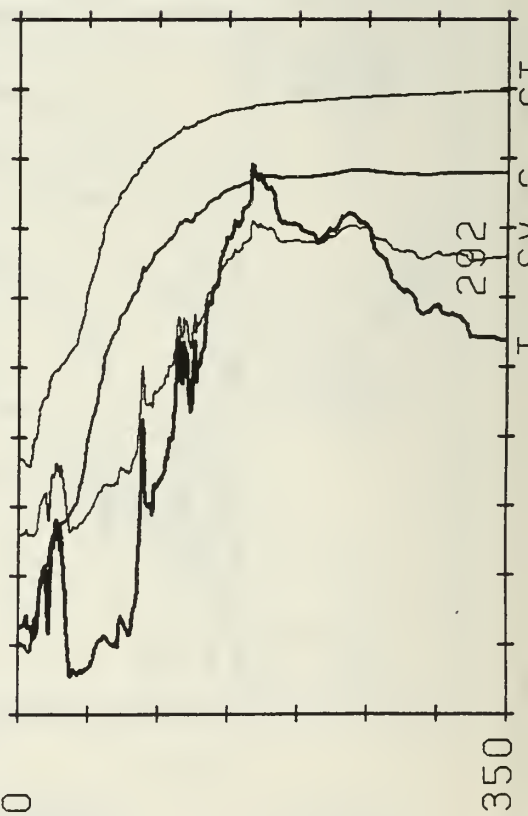
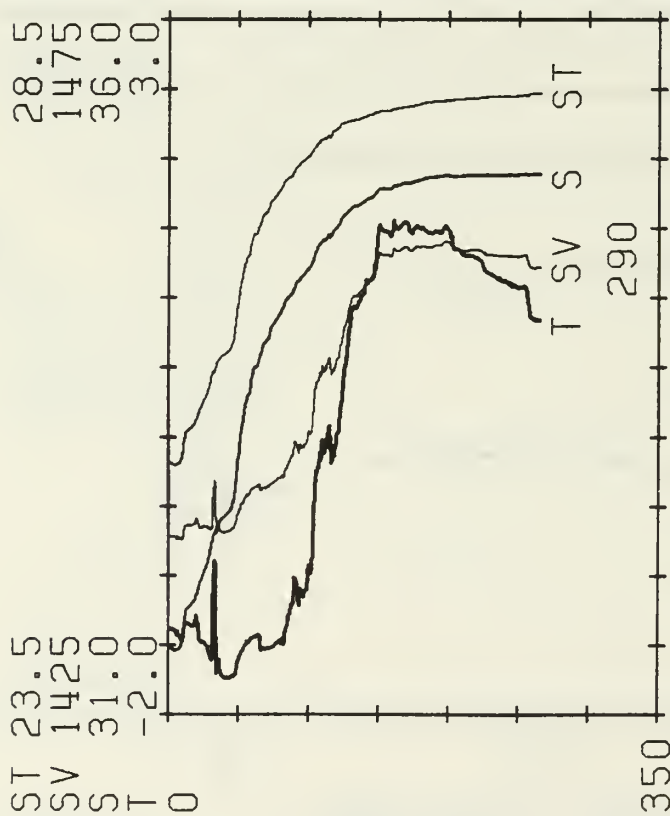
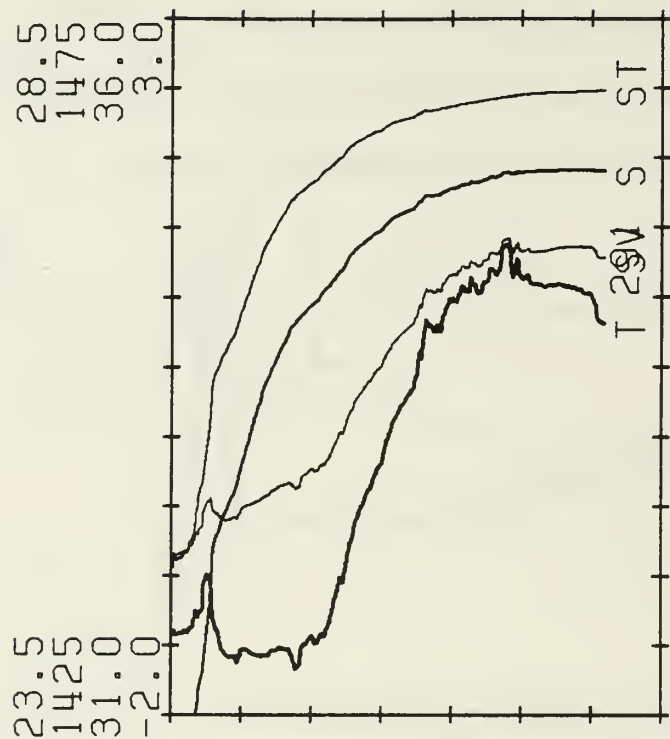
MIZLANT 84 CTD STATIONS

MG/CC
M/SEC
P.P.T.
DEG C



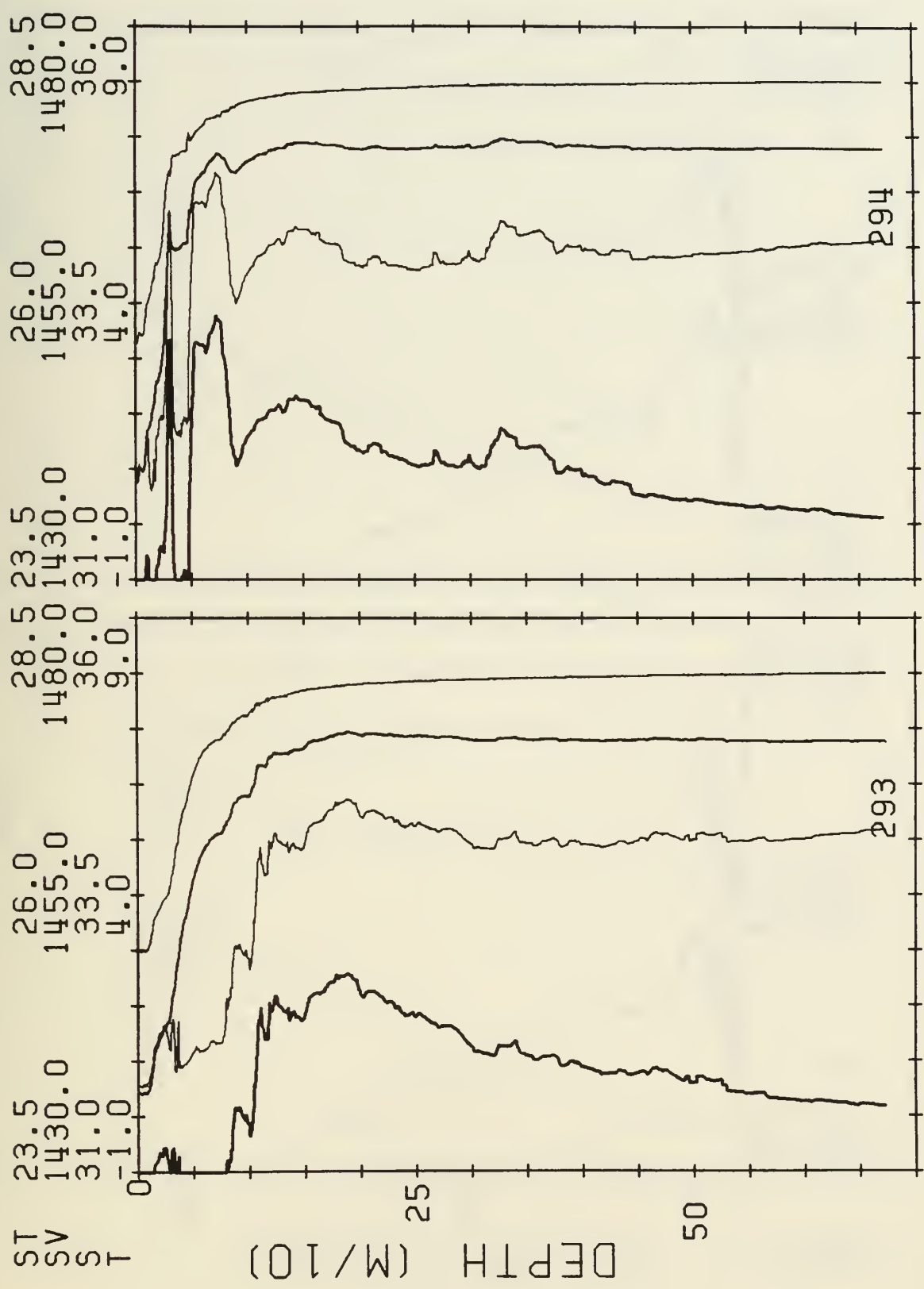
MG/CC
M/SEC
P.P.T.
DEG C

MIZLANT84 C.T.D. STATIONS



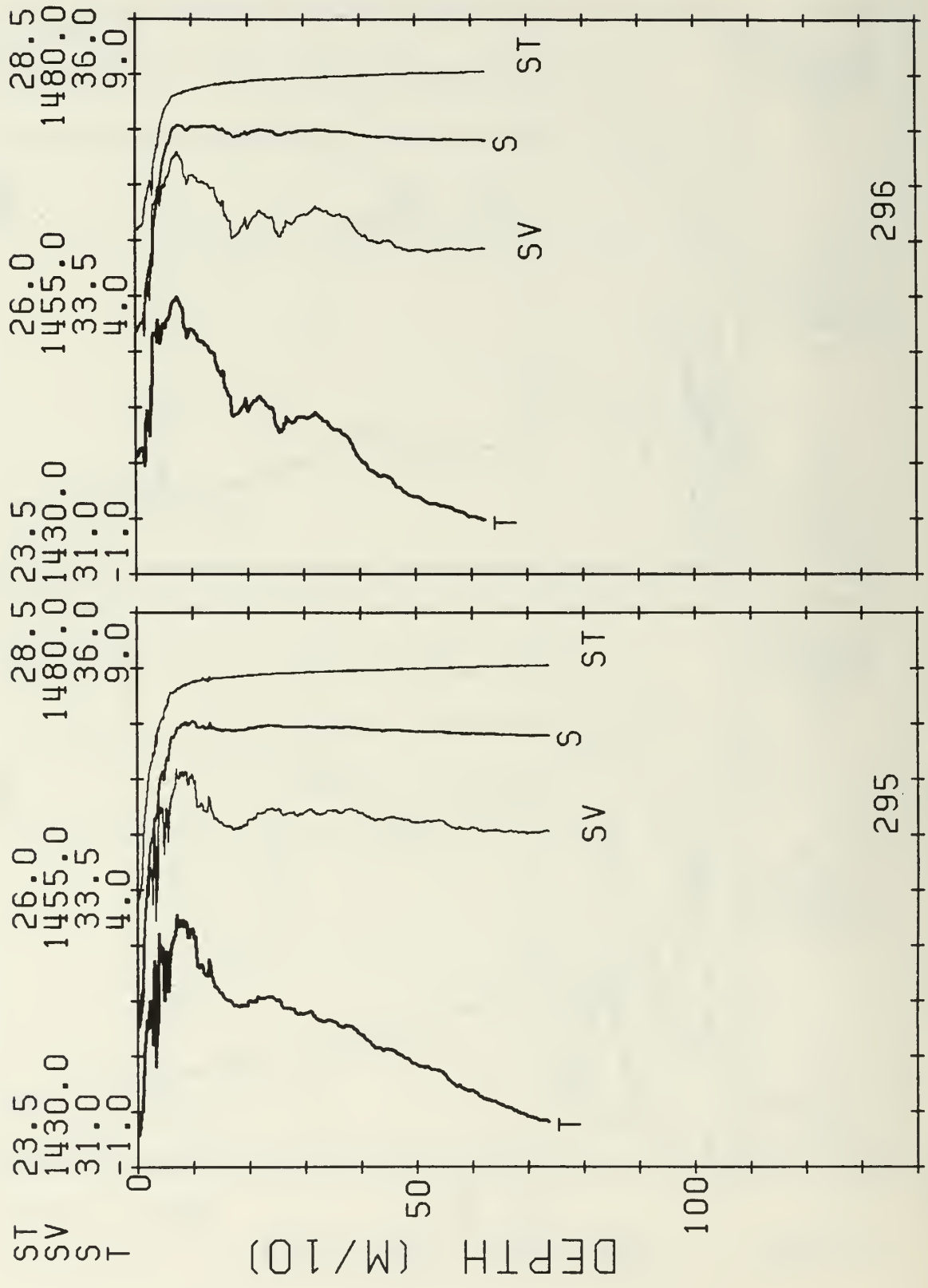
MG/CC
M/SEC
P.P.T.
DEG C

MIZLANT 84 CTD STATIONS



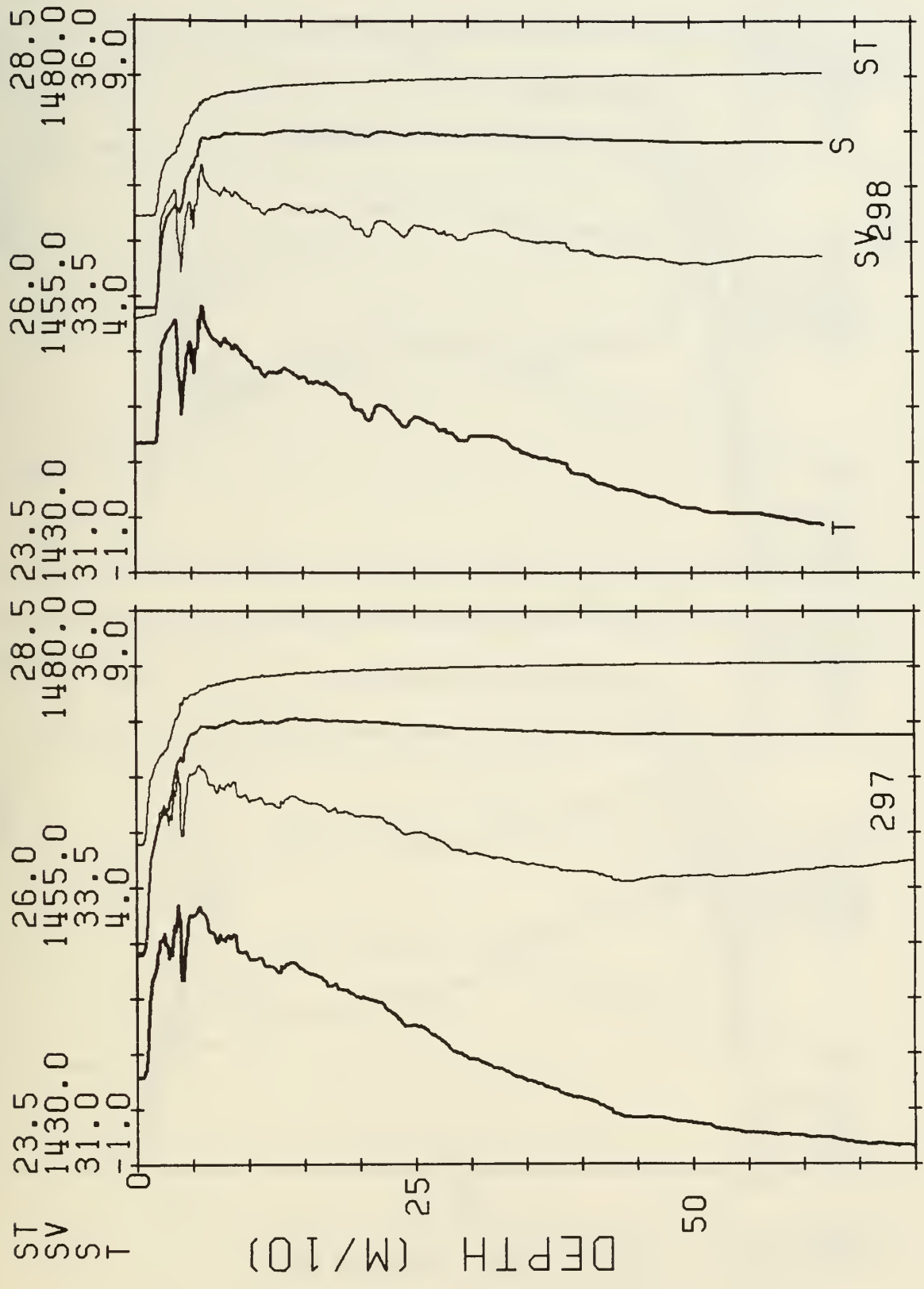
MG/CC
M/SEC
P.P.T.
DEG C

MIZLANT 84 CTD STATIONS



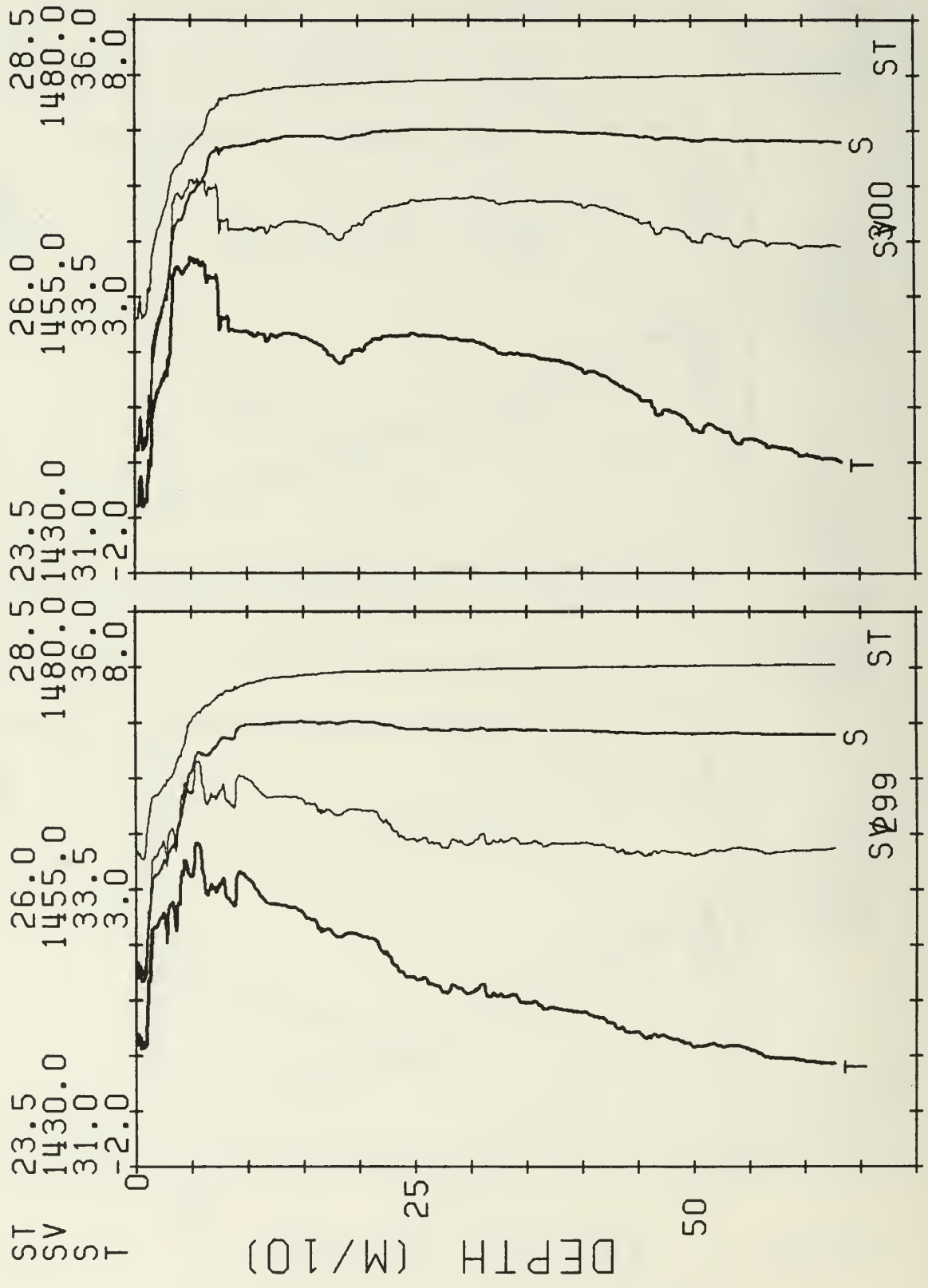
MG/CC
M/SEC
P.P.T.
DEG C

MIZLANT 84 CTD STATIONS



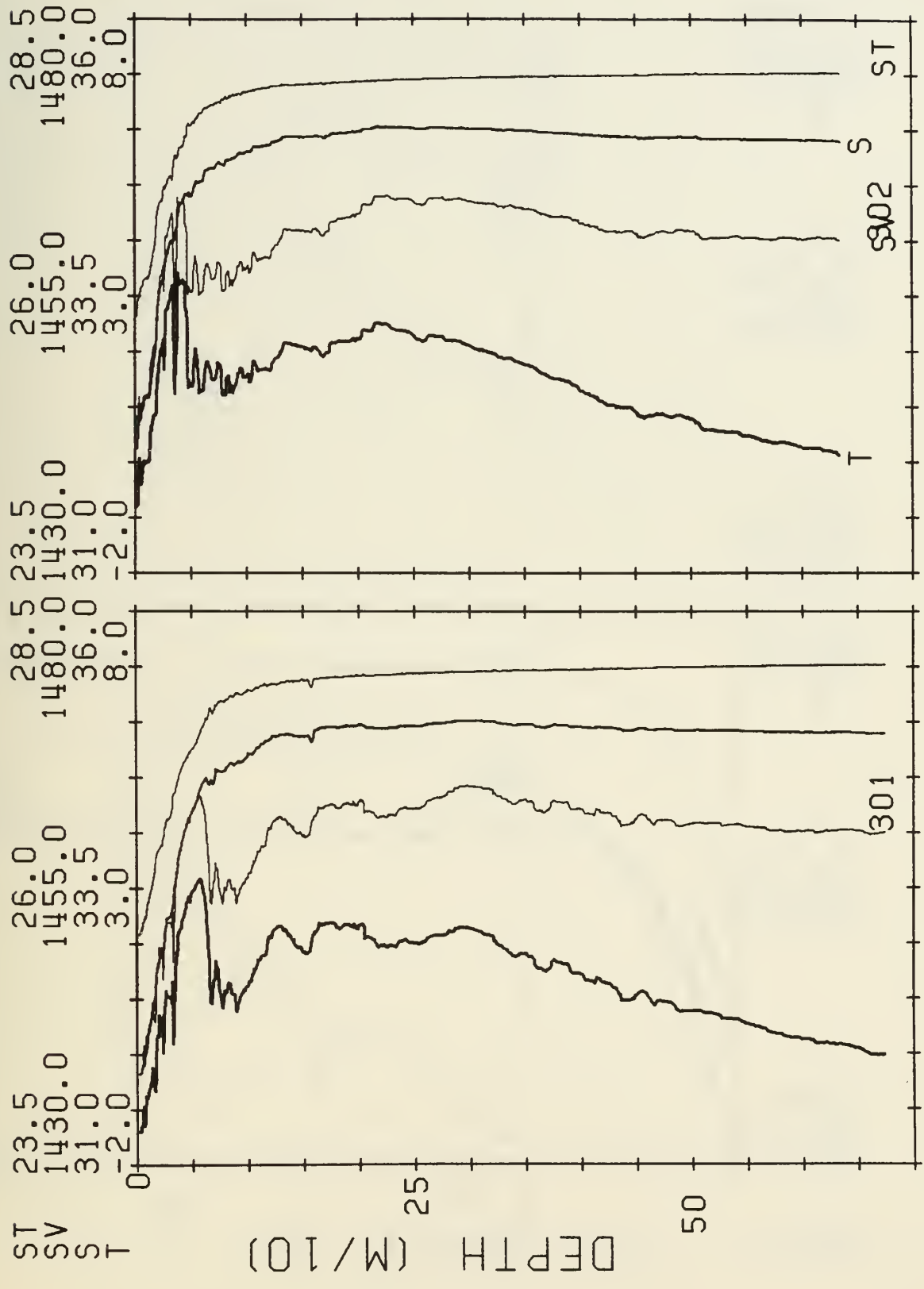
MG/CC
 M/SEC
 P.P.T.
 DEG C

MIZLANT 84 CTD STATIONS



MG/CC
M/SEC
P.P.T.
DEG C

MIZLANT 84 CTD STATIONS



28.5 MG/CC
 1480.0 M/SEC
 37.0 P.P.T.
 13.0 DEG C

26.0
 1455.0
 34.5
 8.0

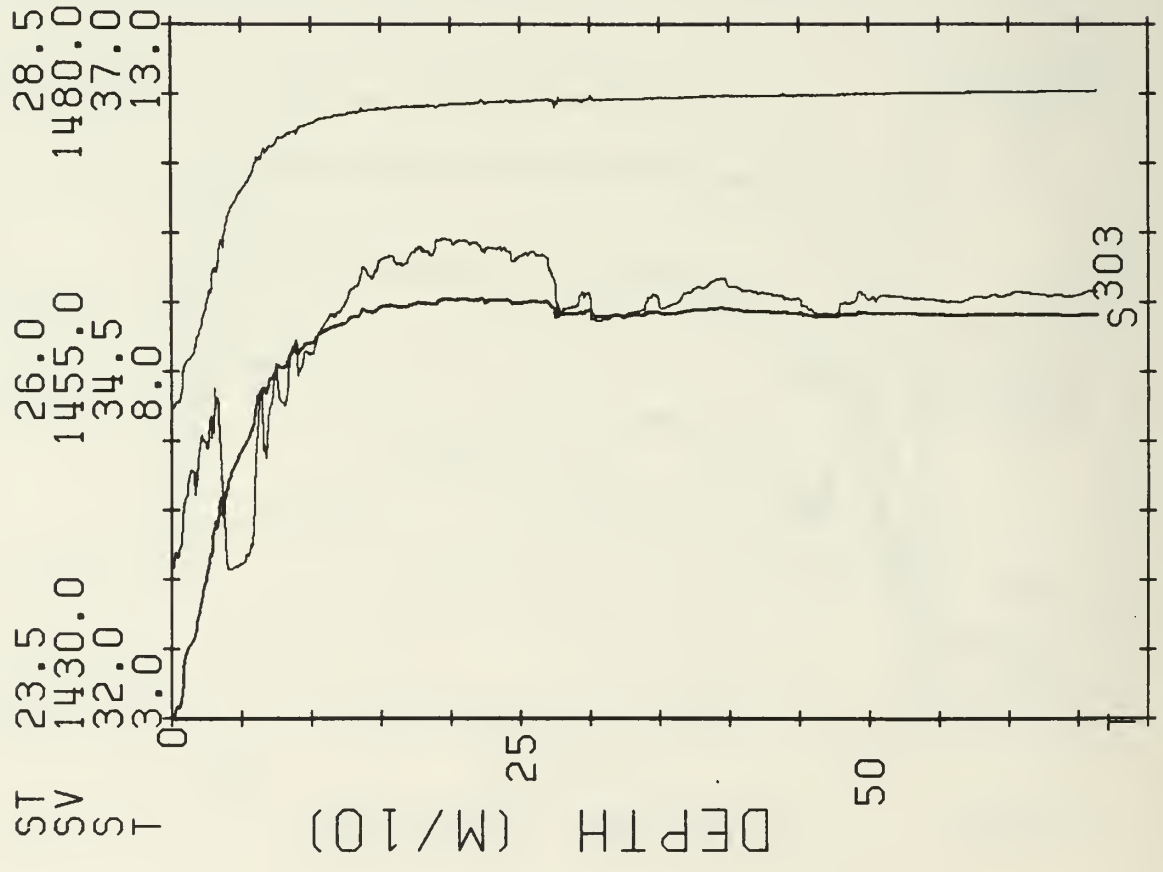
23.5
 1430.0
 32.0
 3.0

28.5
 1480.0
 37.0
 13.0

26.0
 1455.0
 34.5
 8.0

23.5
 1430.0
 32.0
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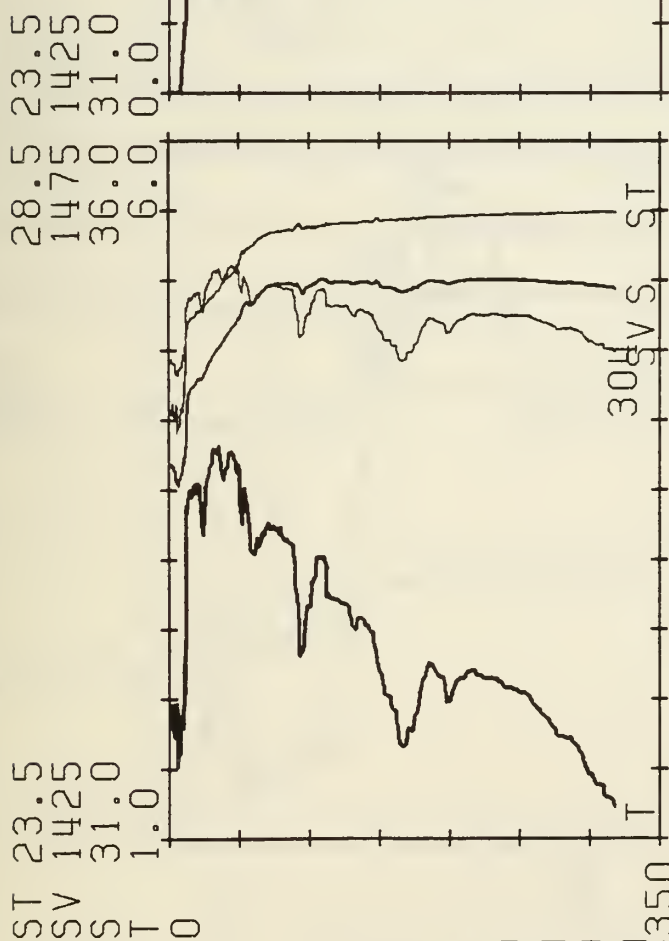
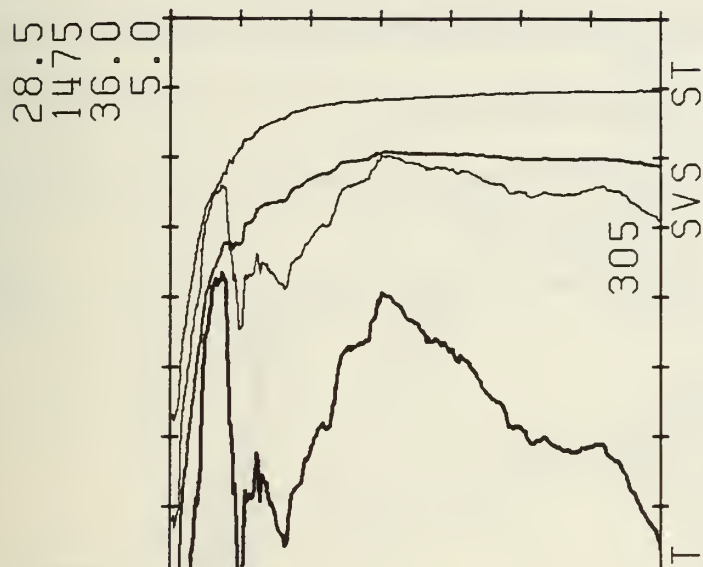
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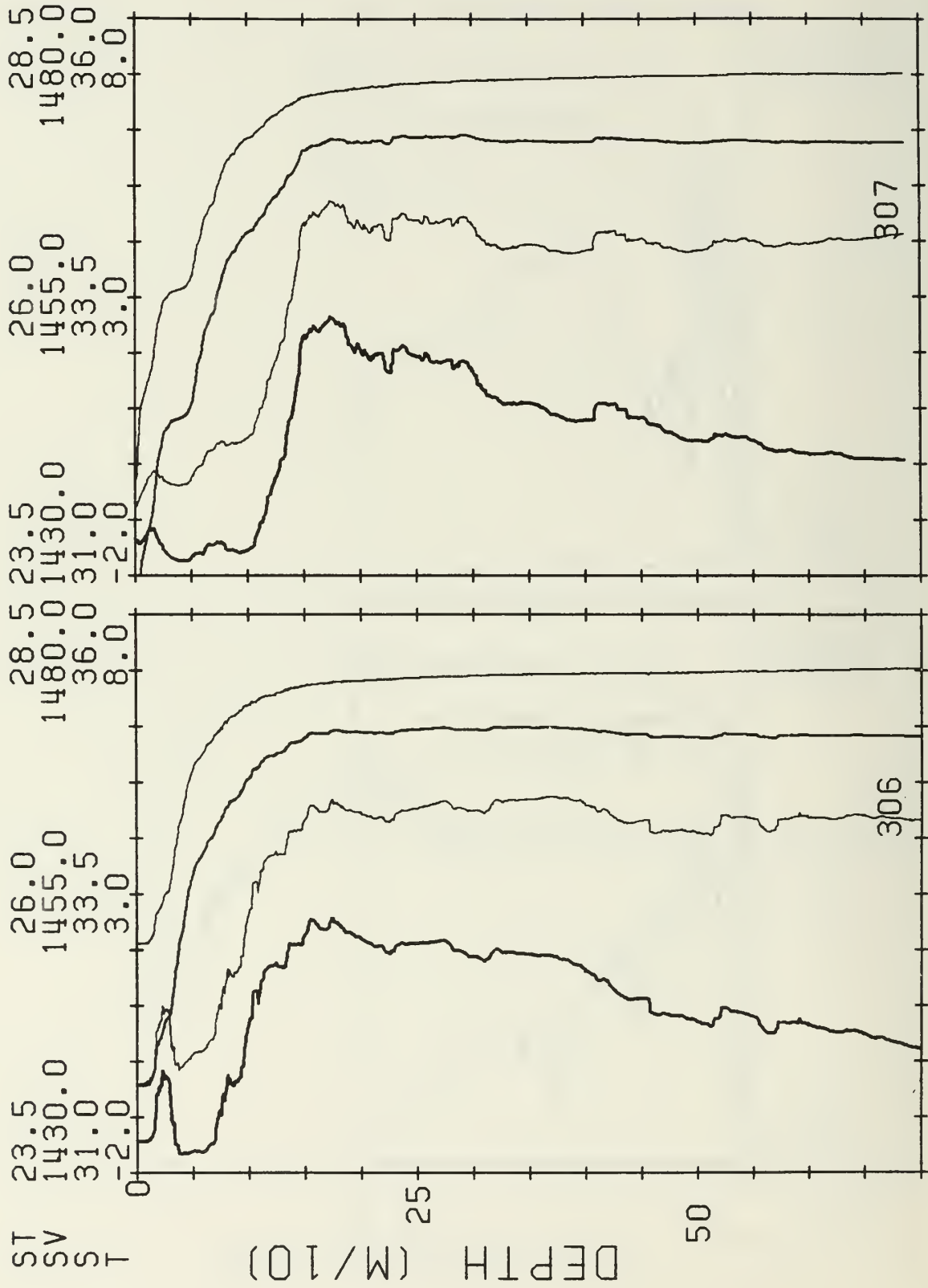
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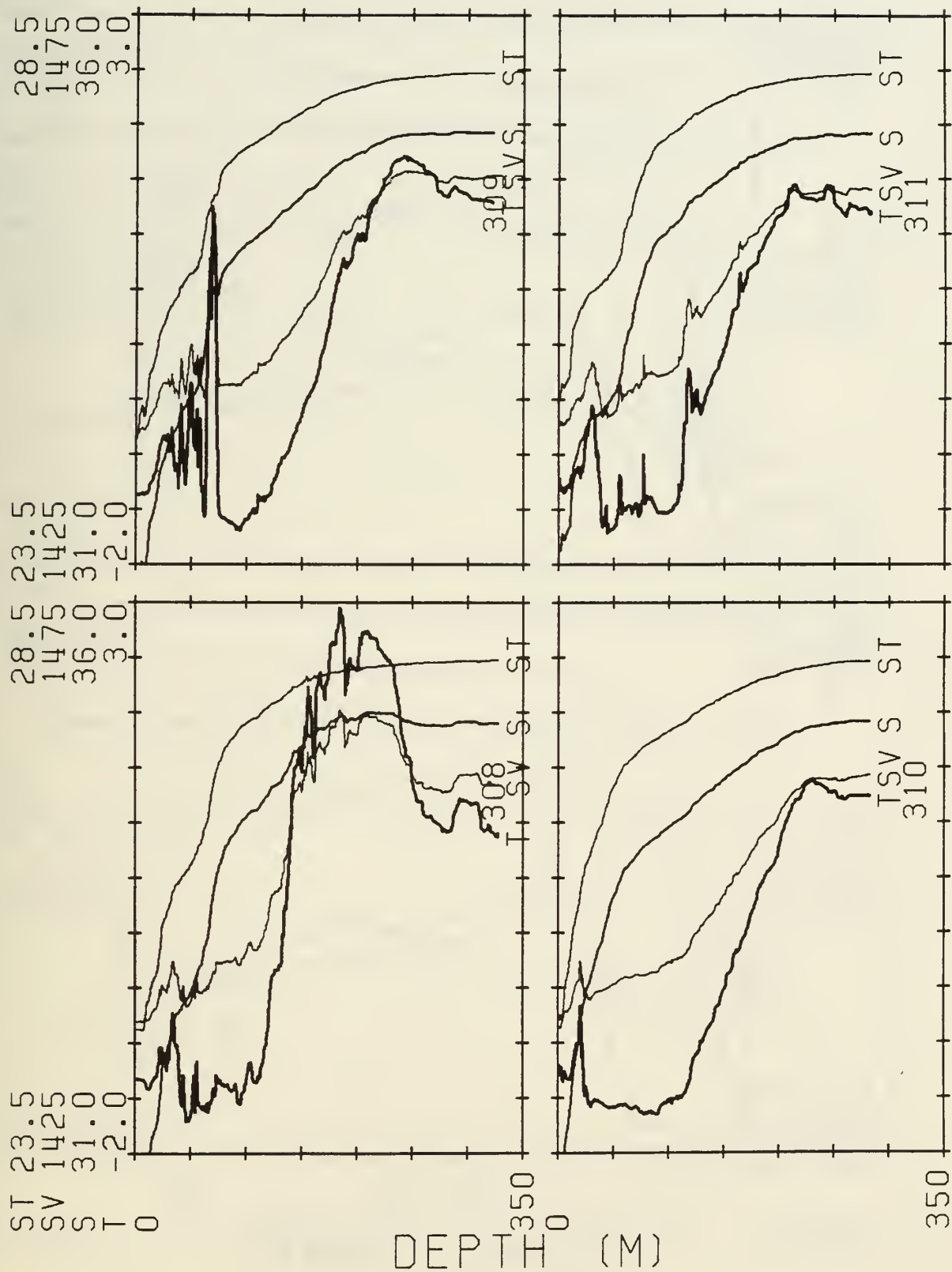
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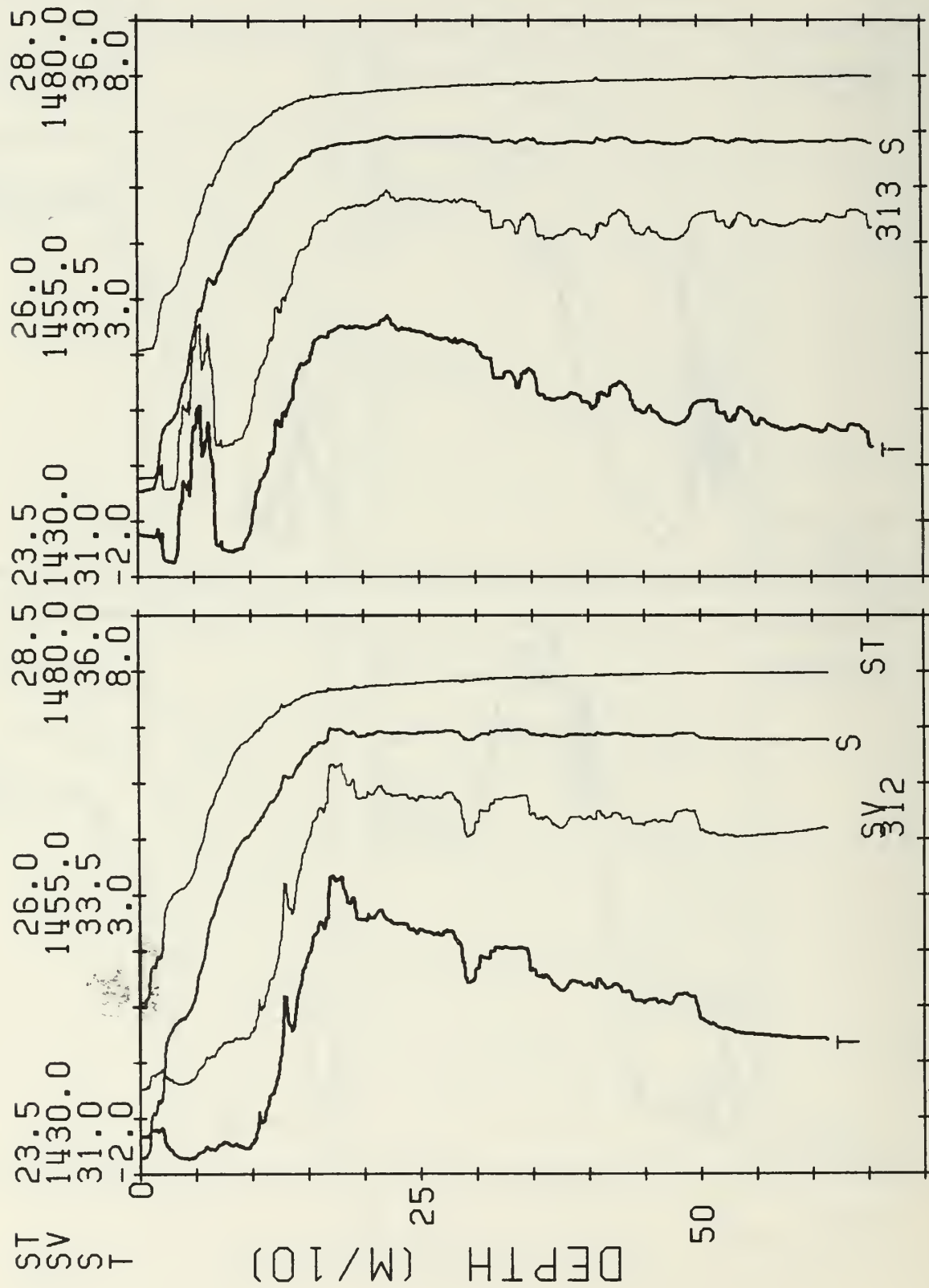
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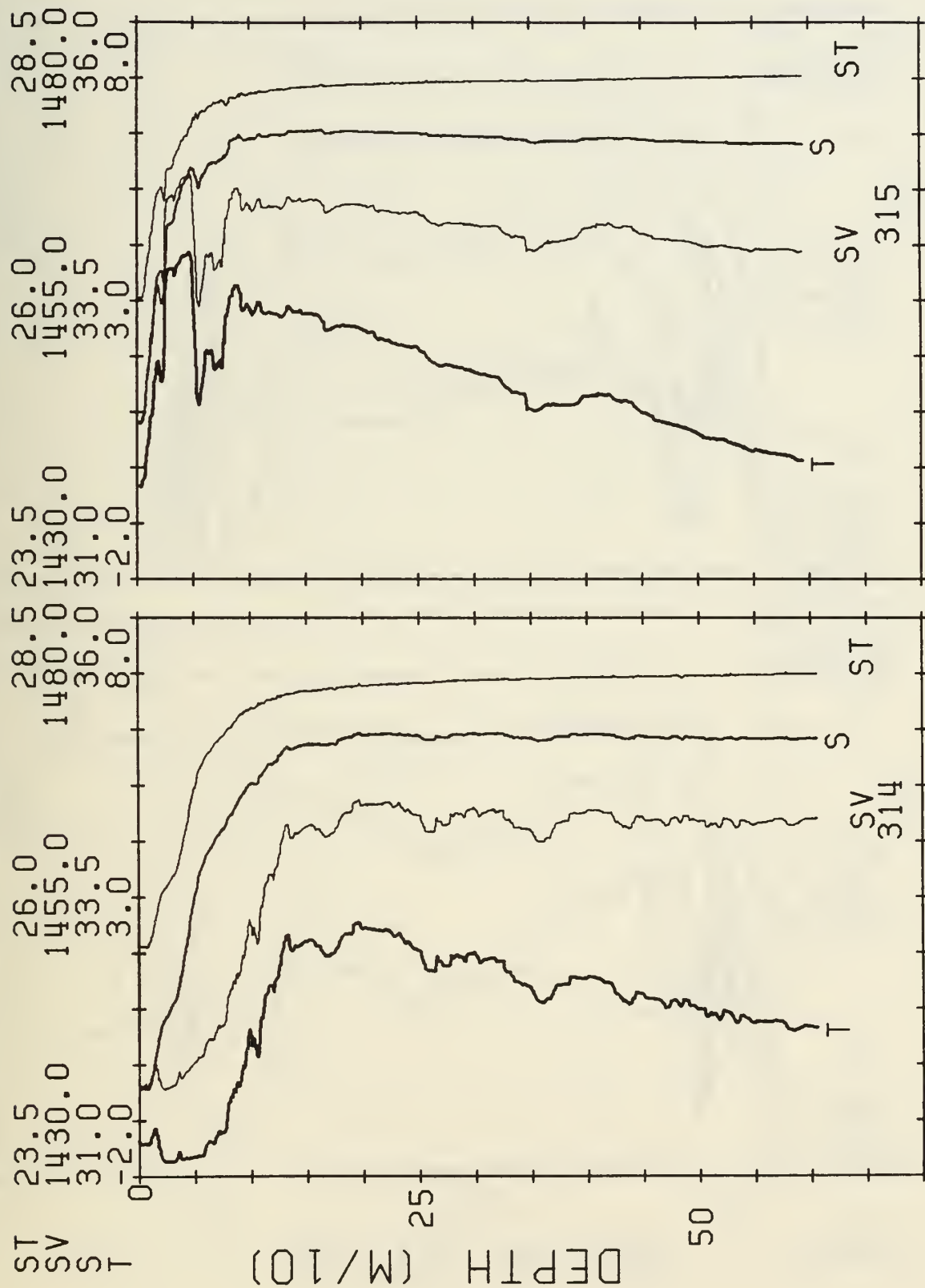
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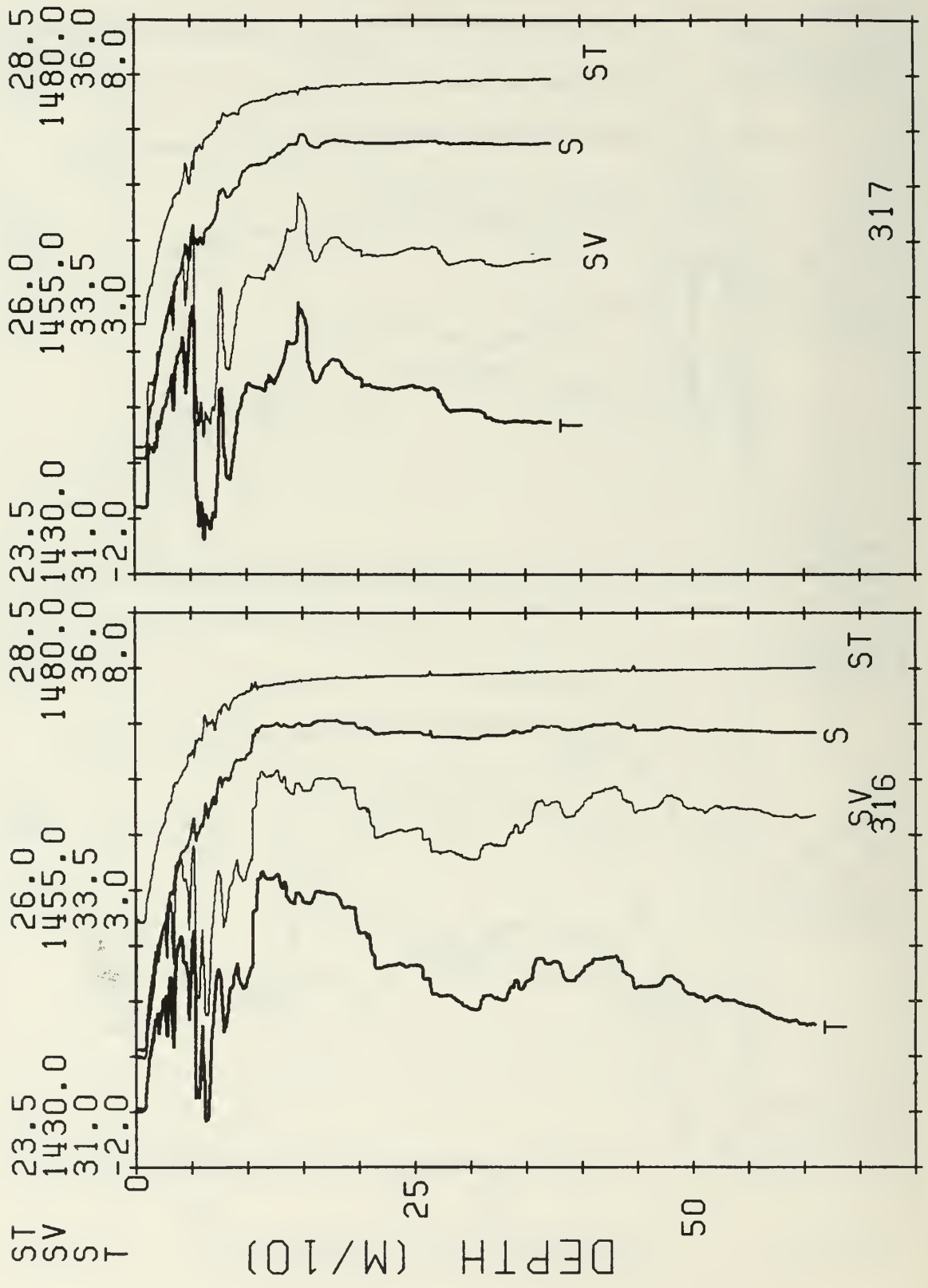
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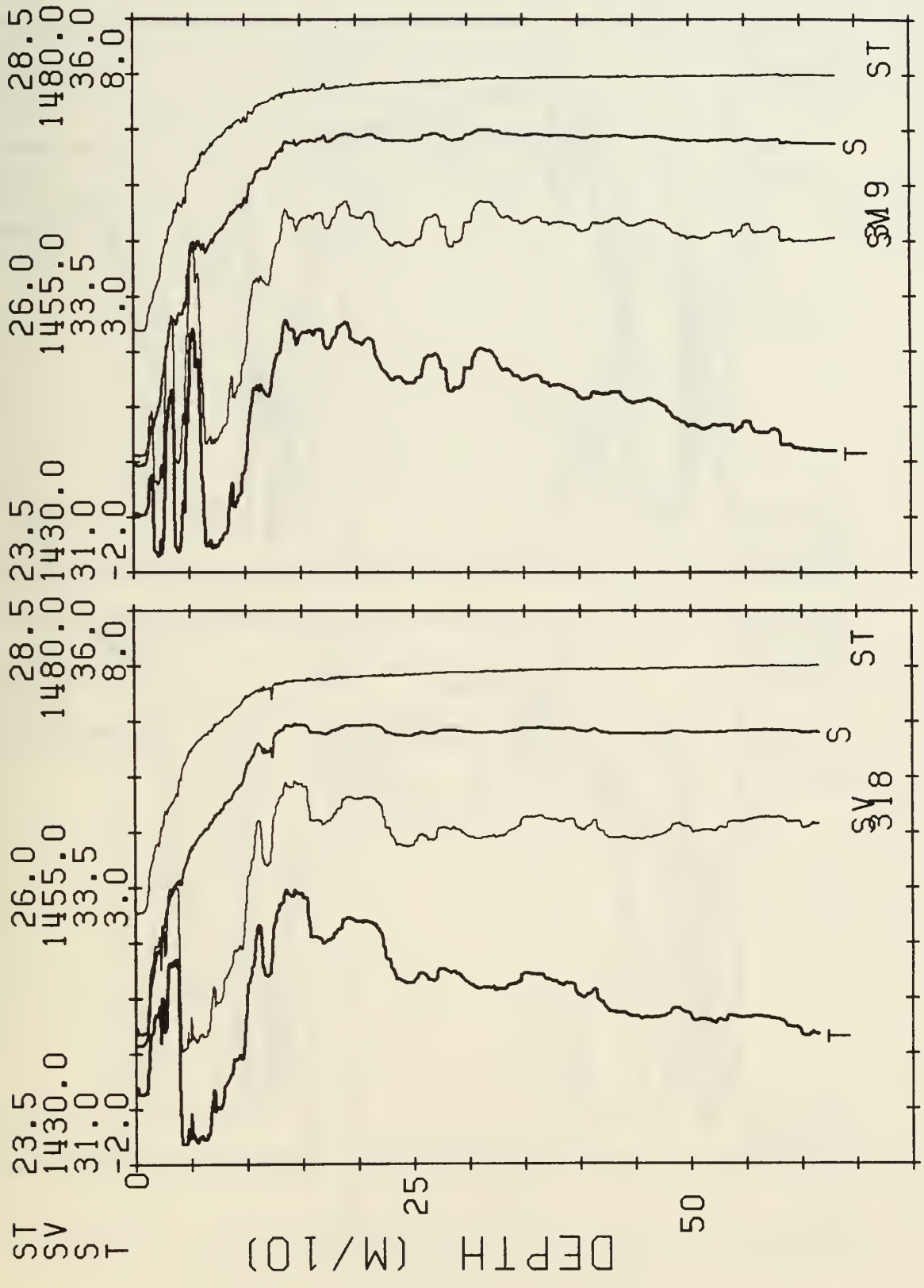
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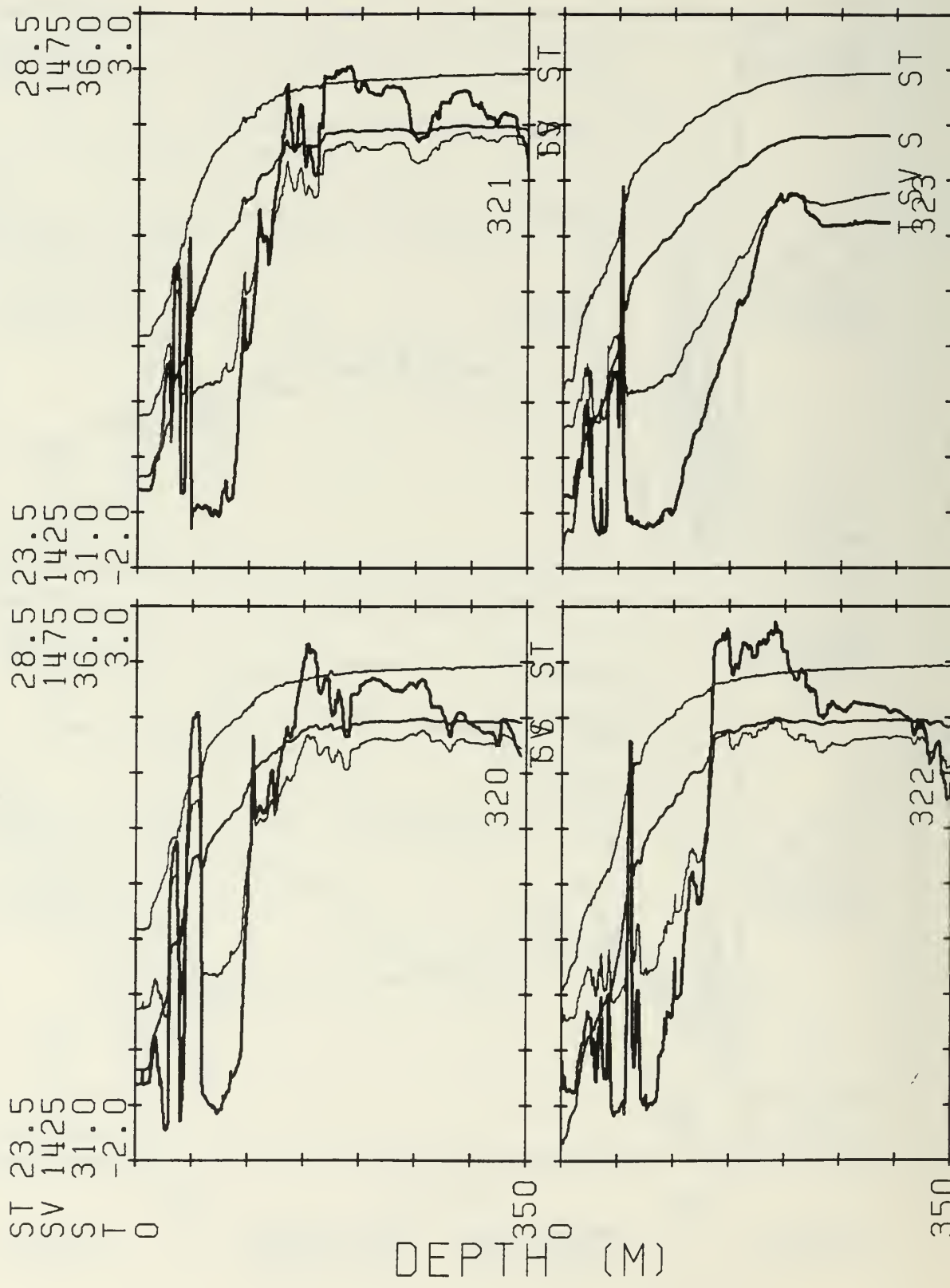
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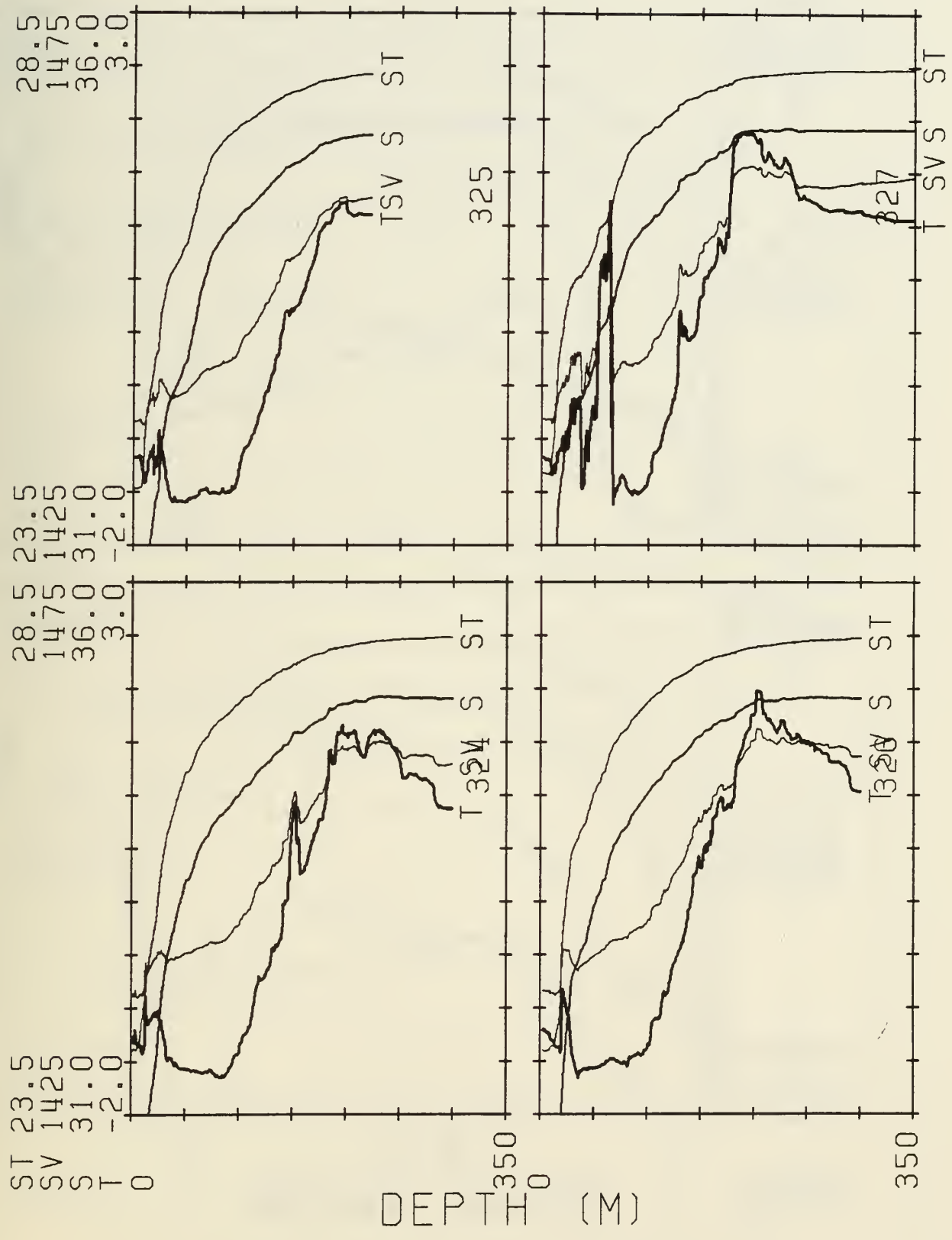
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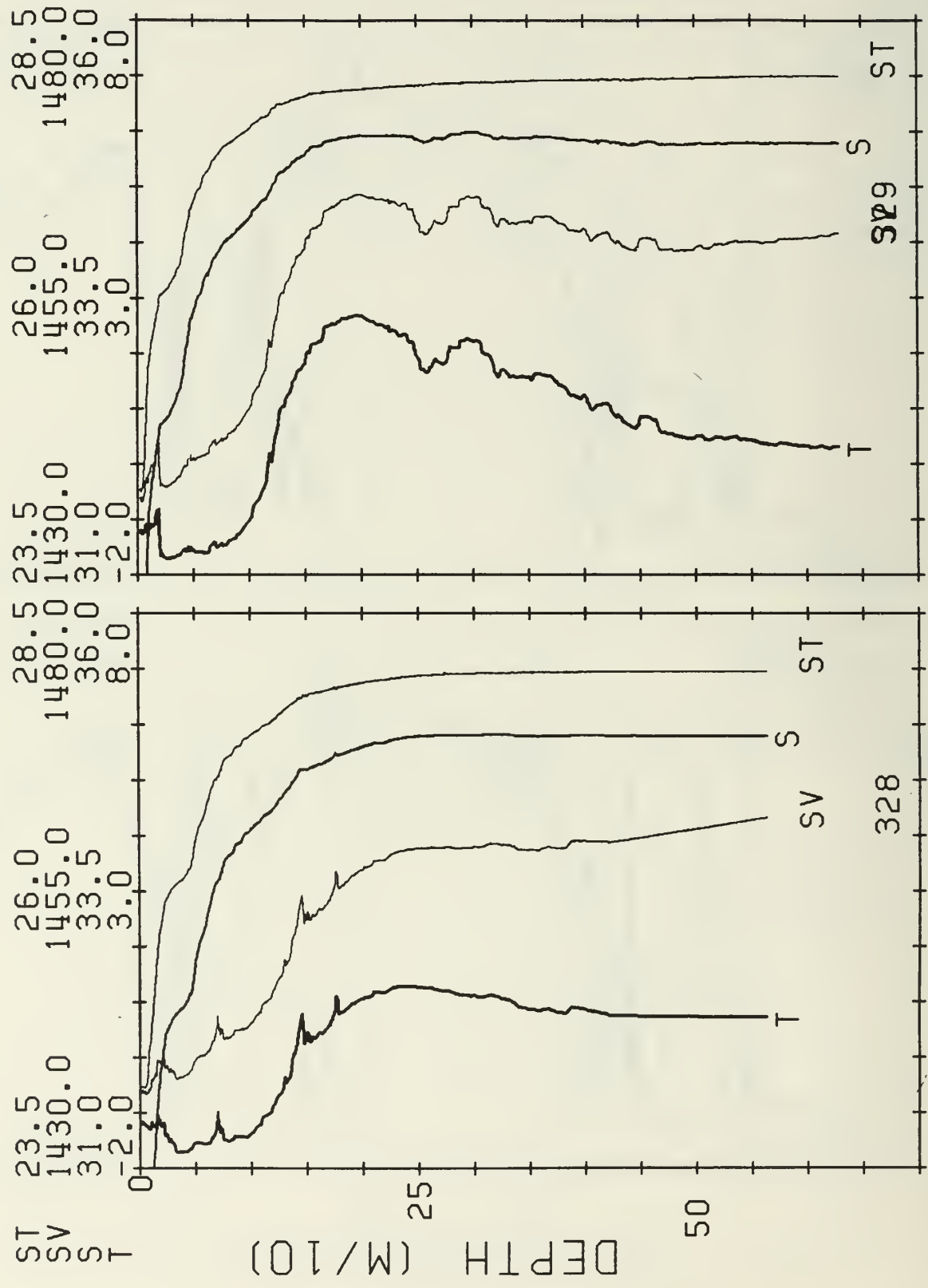
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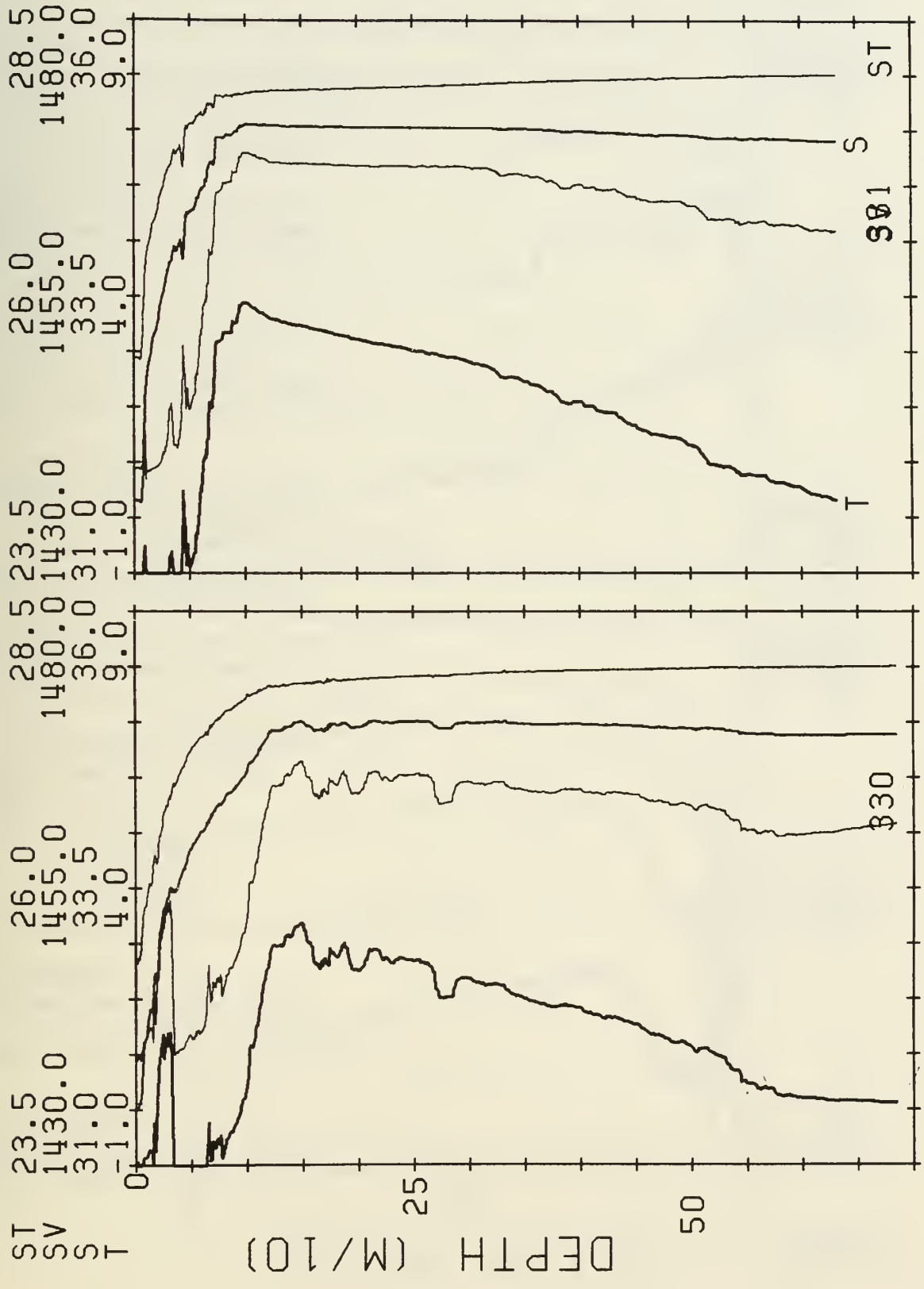
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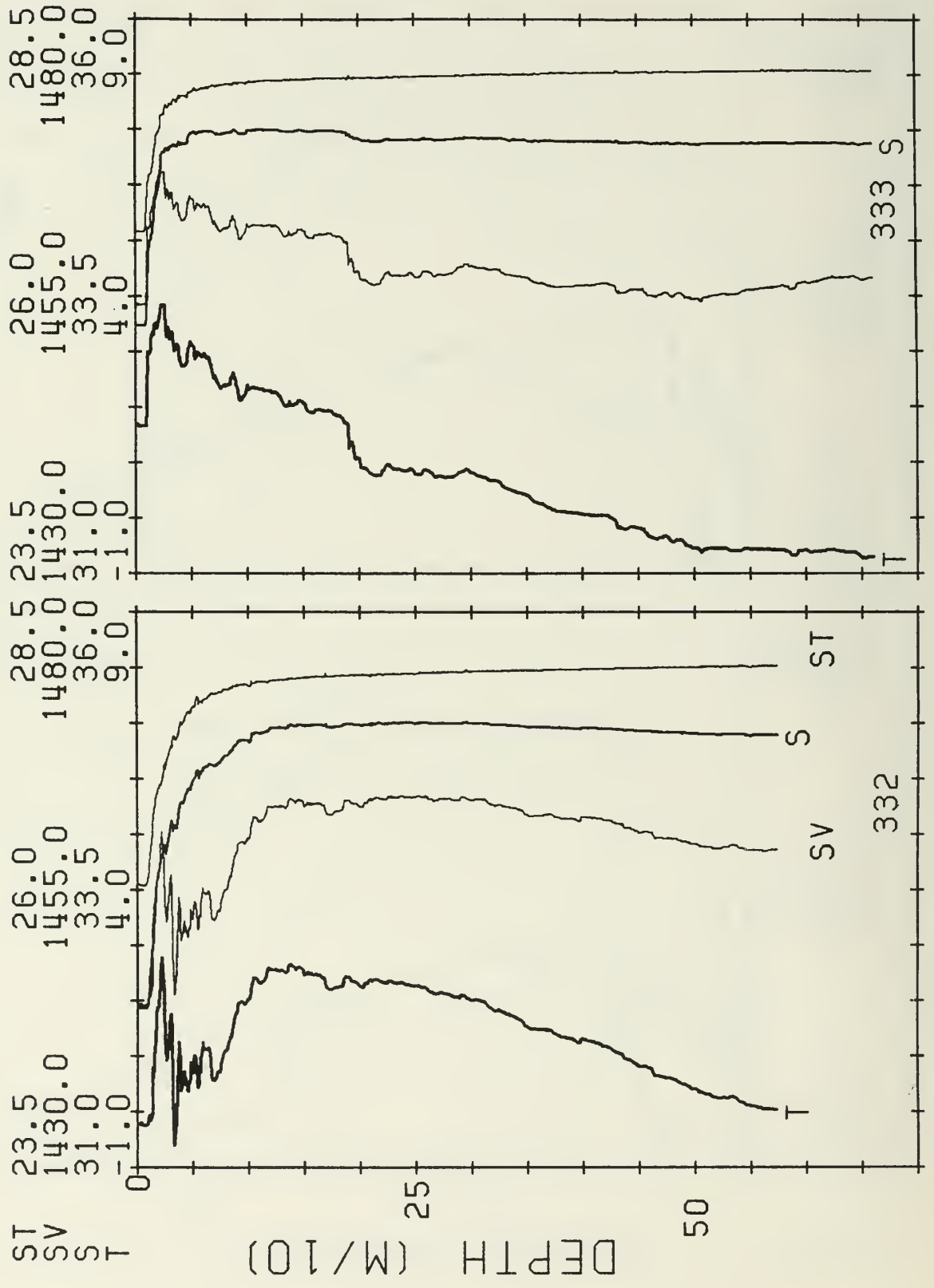
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